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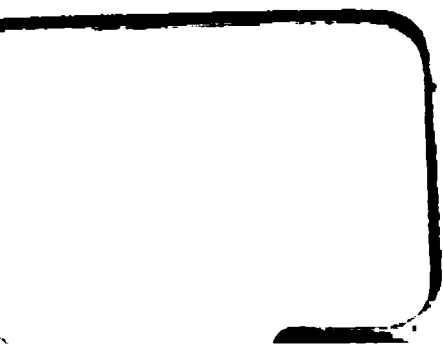
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INDEX

—TO THE—

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EDITORS :

M. J. DEROSSET, M. D.

THOMAS F. WOOD, M. D.

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ORIGINAL COMMUNICATIONS.

LACERATION OF THE CERVIX UTERI.

READ BEFORE THE MEDICAL SOCIETY OF NORTH CAROLINA, AT
ITS TWENTY-FOURTH ANNUAL MEETING—Salem, N. C., May
1877. BY JOSEPH GRAHAM, M. D., Charlotte, N. C.

AMONG the many causes of uterine disease following parturition, perhaps none is more common than this accident—none more easily recognized by those familiar with it, nor more frequently overlooked by the uninitiated.

In the year 1874, during a visit to New York, my attention was first called to it by Dr. Thomas Addis Emmet, Surgeon to the Woman's Hospital of that city, to whom belongs the honor of having first recognized its importance as a factor in uterine disease, and suggested to the profession an operation for its cure.

Although nearly twelve years had already elapsed since the discovery, nothing had yet been published concerning it, either at home or abroad; but in November of that year that gentleman, in an excellent article in the *American Journal of Obstetrics*, set forth his experience at length.

The paper having been read, in September previous, before the

Medical Society of the county of New York, Dr. Sims, being present, attested his high appreciation in the following emphatic language, viz: "There can be no objection, no opposition to the operation. We must accept it as Dr. Emmet has given it to us. We cannot modify the operation; we cannot change it; we cannot improve it, for it is perfect—perfect in its method and perfect in its results."

Notwithstanding the eulogistic endorsement of this distinguished leader in gynæcology, the profession have been slow to adopt his sentiments. And no author with whom I am familiar, either foreign or domestic, has even described the *operation*, or appears, as yet, to attach a worthy significance to the injury itself, simply, I am persuaded, for want of recognition, mistaking it for some other trouble, such as a patulous or granular erosion of the cervix (so-called ulceration) of a very intractable form, and even sometimes, it may be, for an epitheliomatous condition.

The chief cause of this failure of recognition, I conceive to be *the position* which patients are generally required to assume while undergoing physical examination, as well as the *kinds of specula* almost in universal use, not only by the profession at large, but also by the great majority of special practitioners of this art, both in Europe and America.

To those most familiar with the lesion, it is possible very frequently to arrive at a correct diagnosis by aid of the vaginal touch alone; but without a Sims' speculum, or some of its modifications, and the patient in the left semi-prone, or, in some very *doubtful* cases, the knee-elbow posture, it will be impracticable to so expose the cervix uteri as to make the injury distinguishable by the eye.

Any quarter of the cervix is liable to become the site of a laceration; hence we have the following varieties: anterior, posterior and lateral, which list may be subdivided into unilateral and bilateral. And again, they may be *complete* or *partial*, the former extending through the entire length of the neck, between the two ora uteri, and the latter compromising its integrity, to a variable extent, short of these limits. The injury through the anterior lip, Dr. Emmet tells us, is the most frequent, but least often met with as a cause of disease. The woman, after confinement, being detained in bed for some time, if the lesion is in the median line, the flaps will be

retained in apposition by the lateral pressure of the vaginal walls, and tend to heal, especially if the vagina be frequently cleansed (as it should always be after parturition) with injections of warm water, to which has been added a small quantity of carbolic acid and glycerine. Unless the fissure through the posterior lip shall have extended into Douglas' *cul-de-sac*, when much inflammation will usually follow, quick and spontaneous union will generally take place—often so perfect as to leave scarcely a line to mark its location.

In the autumn of 1876 a lady was sent to me from a neighboring county with a very marked case of the worst form of fissure in this locality, accompanied by a very troublesome retroversion, for the latter of which, together with a supposed "extensive ulceration," she had been very unsuccessfully treated. Her ill-health had supervened upon a hard labor, which had been terminated by instrumental delivery three years prior to my seeing her. During all this long interval she had been almost constantly confined to her bed. Upon examination, the cervix revealed a *rent* in the posterior lip extending to the vaginal junction, and beyond this a cicatricial band marked the course of the fissure, which had entirely traversed the posterior *cul-de-sac*.

A violent cellulitis had been a sequel of the lesion, and the cicatrix had so contracted as to form a stout cord, which afterwards interfered very materially with the adjustment of a suitable pessary for the relief of the displacement.

After the requisite amount of general and local preparation, the fissure of the neck was closed, according to Dr. Emmet's plan (to be presently described) and healed beautifully, and with after-treatment suited to her general condition, she was soon restored to health, and has not suffered a relapse.

But it is with the *lateral* lacerations we shall have oftenest to contend as causes of uterine disease. On account of their peculiar locations, the flaps cannot be kept sufficiently in apposition to insure healing during the early days after confinement; and so soon as the woman begins to walk about, the heavy uterus, in a state of subinvolution, with weakened supports, begins to sink down in the pelvic cavity, and as it settles the posterior lip is caught on the posterior vaginal wall, while the anterior is driven on, by the weight of the organ, in the axis of the vagina, separating

the flaps wider and wider, thus keeping up, by friction, a constant fretting of the raw surfaces, from which a sleeplessness, nervousness and utter wretchedness is produced, which can be better imagined than described.

Soon after labor the cervix, together with the body of the organ, is undergoing fatty degeneration, and the soft lips become flattened against the opposing surfaces:; and if the injury is bilateral, extending up to, or beyond, the vaginal junction, the mucous membrane of the canal of the cervix rolls out, and the lips become everted, and we have what is oftenest mistaken for an extensive "ulceration," so-called. Should this character of lesion have existed for some time, the mucous follicles of the cervix become affected, and cystic degeneration, with its little, round, hard bodies, studded through the tissues, supervenes. The cervix will also appear, upon examination by the touch, as if constricted about the vaginal junction, and much broader below; thus acquiring a shape which has been very aptly likened, by Dr. Emmet, to an inverted trumpet.

With these broad, flattened lips, in a state of granular erosion or cystic degeneration, and the cervical endometrium congested and everted to such an extent as to interfere seriously with the circulation below the os internum, the form of the cervix is so changed as to leave but little trace of the laceration, and the lesion would be scarcely recognized by the inexperienced eye.

In unilateral laceration, extending the full length of the cervix, the mucous membrane will be everted to a greater or lesser extent, but decidedly less than in the bilateral form.

This is the condition most frequently encountered, and described as "*patulous os*;" and many, no doubt, while endeavoring to pass the uterine sound or probe into the *centre* of this opening, have been struck with the fact that it would only enter the canal, after sliding down to one angle. Whereas, if this were truly an open or enlarged os, the probe would pass more readily at the centre than elsewhere.

Let the patient now assume the position on the left side, and the cervix be exposed by means of a Sims' speculum, in the hands of an assistant, and if you draw together, with tenacula, the two sides, you will find the instrument entering, without obstruction, directly through the centre of the opening. During this procedure, it will

also be observed that not only the apparent size of the os, but also of the whole cervix, will be materially diminished, and the normal outlines will be sufficiently restored to give convincing proof of the character of the existing lesion. Previous to the time when my attention was first called to lacerations of the cervix uteri as a cause of disease, when I began to use Sims' speculum in every-day practice, I had been much perplexed with this problem of the canal not being *constantly* found in the centre of this "capacious os."

I remember now a very striking case of this kind, with the flaps in a granular condition, which was treated by me ten or twelve years since, and relieved, by rest in the recumbent posture, local alteratives, etc., etc.; but which would always relapse soon after the patient resumed exercise on foot. After one of these courses of treatment, and for the relief of an accompanying prolapsus, I placed a circular, hard rubber, concave pessary, with a small central opening, with the hope of preventing her wonted relapses. In this I was successful, without being aware of the true reason, which was this: The pessary, resting against the front of the cervix, lifted the organ in such a way as to keep the flaps together and produce a partial anteversion, thus removing the constitutional disturbance which had been so long kept up by the friction of the raw surfaces against the vagina.

This lesion is a most fruitful source of subinvolution and chronic congestion. And some of the most intractable hemorrhages encountered within the month succeeding parturition, followed, perhaps, by menorrhagia and metrorrhagia, are due to these lacerations, and in many instances the blood issues directly from the lips of the wound.

Almost, indeed, I might say, the whole of the *written* history of this lesion, as a cause of uterine disease and its corresponding operation, is confined to Dr. Emmet's able paper, with only an occasional allusion to it in the published proceedings of some New York Society, by some gentleman accustomed to frequent his instructive clinics at the New York State Woman's Hospital. Consequently I have been obliged to draw largely, in describing the accident, upon what he has so ably given us, and shall do so still further when I come to detail an account of the operation. But in so doing I here cheerfully disclaim any desire or intention of

appropriating *one tithe* of that meed of praise which is so his. My whole purpose will have been fully subserved if my efforts shall prove the means of bringing any to a full understanding of this important subject.

The accident having but so recently been recognized as a cause of disease, statistics are wanting to establish its exact frequency.

Dr. Emmet says "lacerations of the cervix are of frequent occurrence;" but I do not remember to have seen any precise calculation from him.

I have seen it estimated by some gynæcologist that *fifty*, by another that *forty*, and my own observation warrants me in the belief that at least *thirty* per cent. of all the *intractable* forms of granular erosion, congestion and arcolar hyperplasia, with their depending displacements and constitutional sympathies, following parturition in multiparous women, are not only *due* to this accident, but will also constantly relapse, until it shall have been remedied by the proper operation.

This estimate will doubtless appear excessive to most practitioners, which is not at all surprising, in consideration of the fact that not more than one in fifty have ever, or would now, recognize a laceration, but would mistake it, as I have frequently done, for a resulting granular erosion; and this can scarcely be wondered at, when such men as Sims and Emmet, with abundant daily opportunities, did not discover it until so recently.

Dr. Emmet's first case was one of double lateral laceration, which had been under Dr. Sims' care, with himself as assistant, and treated for *granular erosion* of a very obstinate form, for a period varying from twelve to eighteen months. Whenever the erosion was healed and the patient set on foot again, the flaps, from friction, would take on morbid action anew, and the whole train of old symptoms reappear. Again and again this happened, till one day, Dr. Emmet tells us, while making some application to the neck, he *inadvertently* caught up the two lips, with a tenaculum in either hand, and drawing them together, was surprised to observe the outline of a cervix of nearly normal size. This procedure he repeated often enough to convince him of the reality of what he had seen, and he then devised and practised, for the first time, the operation which he afterwards published. Thus, almost accidentally, was discovered the bearing which this lesion has upon uterine disease.

The above case was operated upon in the latter part of the year 1862, and was the result of a hard, tedious labor ; but the histories of many of those which I have seen show the accident to be not at all uncommon after sharp, quick ones, with violent uterine contractions. Dr. Emmet thinks the latter kind, I believe, often complicated by perineal laceration. I have not, however, found it frequent in my experience. A more common occurrence has also been noted by him after *instrumental* delivery, but he does not maintain any relation between them as cause and effect. Experience, I think, will prove only a coincidence, at least, as regards the injury in this section, where the use of instruments has not been at all common. Whatever be the cause (and I am persuaded it varies in different cases), it often follows what is known as a "dry labor," especially if the os was thin, hard and unyielding.

I have met with a number of lacerations in the last few years, and it has been my good fortune to relieve them by operation as opportunity afforded ; and I recollect many others, which, previous to that time, proved very troublesome on account of relapses, but which might have been very easily disposed of had I then appreciated the cause as I do now.

Let me reiterate what I noted on a previous page, that any one confining himself to Fergusson's cylindrical, or any valvular speculum, will search in vain for examples of this lesion, for it is only by means of some perineal retractor and the patient in Sims' position, that the cervix can be exposed for ocular demonstration.

Before describing the operation proper, let us note some of the points essential to success, as well as the results to be reasonably anticipated from its performance. We can hardly find any case requiring operation which would not be benefited by some preparatory treatment, local, if not general. The duration varies from a few weeks to as many months.

The surrounding viscera, with their connective tissues, as well as the uterus itself, will be found in a state of congestion, at least, which must be removed by the use, night and morning, of vaginal injections of two or more gallons of *hot* water, from 100° to 110°.

This quantity of water will usually be sufficient to insure the contraction of the relaxed and disturbed blood-vessels, which is the object sought, and must be obtained, even if the quantity of water

has to be doubled. After about seven years experience with it, I believe the following to be the best mode of using it: Let the patient be placed on her back across the bed, the hips drawn close to the edge, and the feet resting in a couple of chairs, placed for the purpose; under her head is a piece of oil or rubber-cloth, large enough to protect the bed and conduct the water used into a receiving tub below, while a bucket in one of the chairs contains the hot water for the injection, which is to be projected through a Davidson's syringe, believing that the force with which the former throws the water adds much to its efficacy. The best nozzle or pipe is made of hard rubber or wood, and the end of it should reach well up behind the cervix into Douglas' *cul-de-sac*. The heat should be maintained by adding, from time to time, hot water from a kettle, which should be at hand; and to about the last quart of water may be advantageously added a teaspoonful of carbolic acid or the same quantity of powdered muriate of ammonia, should there be much tenderness on pressure.

The uterus, usually in a state of subinvolution, sinking into the pelvis, drags on the surrounding connective tissue and obstructs the circulation. To relieve this the organ must be elevated to its normal height by means of a well-fitted pessary, which will keep it in an anteverted position, with the flaps in contact, at least; thus avoiding a source of irritation from the jutting of their edges upon the vaginal walls. Whenever the tissues are too tender for the tolerance of a pessary, I have accomplished the same result, *for a time*, by means of the daily application of dossils of cotton soaked in glycerine and borax or carbolic acid—a small one may be carried up behind the neck into the posterior *cul-de-sac*, and a longer one so placed in front as to produce as much anteversion as possible.

Alterative applications must be made, from time to time, to any granular erosion which may be present.

Cystic degeneration must be dealt with in like manner, with the addition of puncturing the distended cysts by means of Buttle's uterine scarificator, or a sharp bistoury, if this is not to be had.

The preparatory treatment should be continued till all tenderness and every trace of cellulitis has been removed from the surrounding tissues; for if any remain it will kindle afresh, and not only defeat the operation, but jeopardize the patient's life also.

The oftener I perform this operation the more I am convinced of

the great importance of local and constitutional preparation on the part of the patient. This having been properly perfected, success is assured ; but failure awaits the most dexterous operator who neglects it.

We endeavor to secure union by the first intention, that none of it be left to granulate ; for any amount of cicatricial tissue in the cervix is badly tolerated by the female economy, often producing neuralgia and other deleterious effects.

Notwithstanding that laceration of the cervix is a very frequent cause of disease after parturition, yet we must not lose sight of the many other and concomitant causes, and be too hasty in our condemnation of the operation, should it not accomplish more than reason could justify us in expecting.

The sewing up of this rent cannot eradicate from the system disease which had existed long prior to the accident, and which, upon a close examination, would be found entirely independent of the condition of the uterus.

The general system must be looked after, and each organ interrogated as to the proper performance of its functions. In vain shall we expect to restore vigor to a depraved constitution by attending alone to the local trouble, while an impaired nutrition is depreciating the nervous forces and producing functional derangements.

Therefore we must anticipate from this valuable contribution to the surgery of the cervix, only so much as its eminent author has claimed for it—that by removing *one* very frequent, and hitherto unrecognized cause of disease, it shall accomplish much towards relieving the suffering female, and still more in preventing relapse.

The instruments required in performing this operation are : a Sims' speculum, double tenaculum, Emmet's uterine tourniquet, two single tenacula, needle-holder, shields, silver wire, needles (usually Emmet's round ones) and a pair of his long-handled, straight-edge scissors, for paring the surfaces. A scalpel may be used for this purpose, but the scissors are much preferable on many accounts. Also the carbolized catgut has been made occasionally to substitute the silver wire, but the latter possesses many advantages.

I shall now proceed to detail the operation, pretty much as originally devised by its author ; for it has undergone but very little

change, and that principally in the modes of fastening the sutures. The patient is placed in Sims' position and anæsthetized with chloroform or ether—I prefer the former. I have done the operation without using any anæsthetic; but few patients will bear it well or remain quiet enough to enable you to go carefully through the various steps. The cervix having been exposed by means of Sims' speculum in the hands of *one* assistant; the flaps being brought together, it is lifted up by means of a double tenaculum in the hand of another, when the instrument known as Emmet's uterine tourniquet is slipped over it, below the vaginal junction, and tightened. The object of this instrument, which consists of a stout watch-spring, passed through a canula, with the application of the ratchet of the *écraseur*, is to control the hemorrhage during the operation, which occasionally is excessive without it. The directions for its application, say—just before tightening the tourniquet, sufficient vaginal tissue should be drawn up through the loop and around the cervix, that the flaps may be easily approximated, while the folds thus formed render the instrument less likely to slip over the cervix, when it has become reduced in size, by the disgorgement of its blood during the operation.

To have this tourniquet properly held, keep the loop in position and prevent its slipping, is one of the greatest difficulties to be encountered. The assistant having charge of this should give his undivided attention to it. Fortunately, very many cases can be operated upon without the necessity of using this instrument, yet it is very valuable whenever required.

Having drawn down the uterus and separated the flaps, the lacerated surfaces are to be freely denuded, from one lip to the other, in a continuous strip, if possible, of uniform width, leaving a broad, untouched tract in the centre, from before backwards, which is to form the continuation of the uterine canal to the os. In freshening the edges, I always begin by removing the strip from the *lower* or anterior lip, thus avoiding much confusion from the flow of blood down upon the surface on which I am cutting, should the upper one have been pared first.

The greater the size of the neck, so much more will be the shrinkage and the broader must be the undenuded tract for the cervical canal and outlet, or they will prove too small when the parts return to their normal size.

Sometimes, on account of great thickening of the central portion, it will be difficult to make the vaginal edges of the flaps fit accurately; when this is the case, a sufficient amount of this dense tissue, which is filled with cysts, should be trimmed off to accomplish the end.

While the tourniquet (and when one is not used, a strong tenaculum) is held by an assistant to steady the uterus, the portion of the lacerated surfaces to be removed is seized by a tenaculum in one hand, and with the scissors in the other, it is separated, care being taken, when arriving at the outer angle, just at the vaginal junction, not to wound the circular artery. Having freshened the surfaces of both fissures in the bilateral variety, and seen that the flaps can be accurately coaptated, we are ready for what is considered the most difficult step of the operation, the introduction of the sutures.

The first suture is passed through the anterior flap, close along the bottom of the fissure, entered well back, and withdrawn just at the edge of the undenuded strip, which is to form the canal; again made to enter the opposite lip at a similar point, so as to emerge on the vaginal surface at a point corresponding to the one of entrance in the other lip. Three or four sutures are usually sufficient for each side. A little care is required in passing the one through the crown of the cervix and approximating the edges of the os.

If the sutures for both sides be passed before securing any of them, much difficulty will be avoided. An undue flow of blood may usually be checked by tightening the tourniquet, when one is used. Should this fail, twisting of the wire next to the bottom of the angle will easily control it.

In securing the sutures on the vaginal surface, I have been in the habit of using little flat shields of lead, with two holes in the centre, for the reception of the ends of the wire—one for each interrupted suture.

My friend, Dr. A. W. Knox, of Raleigh, but recently of the New York State Woman's Hospital, informs me that Dr. T. Gail-lord Thomas uses a narrow strip of lead, corresponding in length to the depth of the fissure, for either side of the cervix, and in this are cut slits to receive the wires. He says, also, that the author of

the operation, after his great experience, has abandoned the use of shields altogether, and drawing up the ends of each wire on a tenaculum used as a fulcrum, he bends or "shoulders" each end, at a point near the vaginal surface of the neck, and twisting them until the little triangle just above the line of operation disappears, flattens them to lie to the vaginal surface, and cuts them off a half-inch in length. He claims that by this means the operation is simplified and a smooth union of the vaginal edges can be secured, even though we may have failed to pass the sutures at precisely corresponding parts in the two flaps. If the wires have been bent so as to lie close to the cervix, and not left too long, they may remain *in situ* for an indefinite period; but they are usually removed in about eight days. In removing them it is always well to cut that part of the loop nearest to you, that it may continue to bind the lips together until it shall have been drawn entirely out. That one nearest the vaginal junction should be first cut, and should there be any tendency to gaping, the others may be left for a few days more, till union is complete. After removal of the sutures the patient should be confined to bed for at least ten days, the recumbent posture favoring the return of the organ to its normal size and the hardening of the newly united seam. If the general health will admit of it, this rule should always be adhered to. The urine should be drawn with the catheter, or a bed-pan may be used for this purpose, as well as for the relief of the bowels. But very many women are entirely unable to empty the bladder while lying on their backs; such must be attended whenever they require it, rather than allow them to rise up. No local treatment will generally be necessary beyond resuming the hot water injections, which had been suspended until after removal of the sutures, unless some vaginal discharge may have required small ones, of about a quart of warm water, with a little glycerine and carbolic acid, to insure cleanliness. Should no cause of irritation or congestion exist, the uterus will rapidly resume its normal dimensions. As in the preparatory treatment, the keeping of the uterus in an *anteverted* position, to prevent gaping and fretting of the flaps, plays such an important part, just so will it be equally essential *now* as a protection to the fresh and delicate line of union. No dragging or straining of any kind should be allowed upon it for some time, lest

by absorption the new tissue be removed and the accident reproduced, either in part or as a whole. A suitable pessary should be adjusted to accomplish the end in view and lift the organ from the floor of the pelvis, until the integrity of the circulation shall have been thoroughly reëstablished and the new seam cemented.

I feel confident that when the profession shall have come to appreciate fully the relation of this accident to uterine disease, and have learned to use the operation as not abusing it, attending diligently to the constitutional and local preparation of the patient, and minutely to the *details* of the operation, as well as to a suitable after-treatment, that a new era will have dawned upon gynæcology—an era pregnant with relief for our patients—a jubilee of deliverance from meaningless cauterizations, and mistaken for a number of doubtful pathological conditions.

MILK SICKNESS—ART. 1.

BY DR. H. G. WOODFIN, of Franklin, Macon county, N. C.

No apology need be offered for bringing this subject prominently before the Medical Profession, and the only diffidence to me in assuming the responsible task is my inability to present the facts of experience and observation with the clearness and force which its importance requires.

That Milk Sickness is a veritable disease—a disease *sui generis*—a well defined specific disease—is susceptible of the clearest proof. That the name is appropriate or otherwise, is of little consequence. Its history is cöextensive with the settlement and improvement of the country in the various localities where it has been known to exist. These localities are a portion of Western North Carolina, East and Middle Tennessee, Kentucky, Missouri, Indiana, Ohio, and perhaps other States. Observations in relation to it have been made by physicians and other citizens of intelligence, and from these observations many treatises have been written and published in the newspapers, as well as in the medical journals. And however vague, discordant and unsatisfactory the different theories and

speculations as to the nature and *Etiology* of the disease, in the material facts and general pathological indications, they clearly concur. These are—

1st. That the poison, whatever it be, is contracted by cattle grazing in certain localities, usually well defined, and communicated to persons who use the milk, butter or fresh beef of such animals.

2d. That dogs, buzzards, etc., eating the flesh of cattle dying of the disease contract it, and with similar manifestations suffer, and perhaps die.

3d. That while the cows that imbibe the poison remain healthy, if regularly milked, their calves, as well as persons who use the milk, become sick and frequently die.

4th. That many animals may feed on the same lands and evidently partake about equally of the poison, and some of them suffer violently and die; others suffer lightly and recover, and others still, perhaps the larger number, remain quite healthy; and that the same is true of families containing several persons, all using the same diet, some are affected with the disease in different degrees of severity, while others remain healthy; and that this difference is usually, but not invariably, owing to the rest or exercise—violent exercise being the ordinary test of its existence in animals, and to a similar excitement may be frequently traced its development in persons. Beeves that have fattened in these infected localities, started to be driven to market, take the trembles and fail the first or second day, while other cattle feeding on the same grounds, left at home, remain healthy; and dogs eating the flesh of milk-sick cattle, by lying quietly during digestion, remain healthy, while others, put on the chase, or otherwise over-heated, soon sicken and die.

5th. That cattle are more subject to the disease than other animals, although horses, mules, sheep, and perhaps others, are liable to take it. My own opinion, however, is that cattle are only more liable to take it because they are more inclined to select for grazing these rich cove lands, where it is supposed usually to be obtained.

That hogs take the disease I think improbable, from the fact that they are seldom, if ever, restrained from feeding on the lands where it is supposed to be, or from eating the carcasses known to have

died with the disease, and I have no well authenticated instance of a hog having the disease, or any disease resembling Milk Sickness.

6th. That the disease disappears when all the lands containing it are cleared and put in cultivation.

7th. I may add to this concurrence of material facts, that the popular errors into which the inhabitants of countries far remote have fallen, are much the same. One is that the disease prevails only in the latter summer and autumnal months; the other that the rays of the sun dissipate the poisonous matter, and the danger exists only in the morning and evening, when the dew is on the vegetation. And many of our citizens have protected themselves by keeping their cows confined until late in the morning and securing their return early in the evening, simply because they do not go far enough to get the poison; and in the other case the cattle will naturally select the warm, open lands for grazing in the early part of the season when the food is tender, in the rich, shady lands in the heat of summer and early autumn. And however successful the experiments may have proven to those who live a few miles from these infected localities, they have proved equally fatal to those who live in their immediate vicinity.

There is danger during the entire grazing season, and at all hours of the day. I have called the attention of our citizens frequently to cases proving these facts, and as far back as thirty years.

Of the topographical and geological character of the localities where Milk Sickness prevails in other States I have no satisfactory data. It has prevailed, to some extent, in all our trans-montane counties. My observation has been confined to those lying west of French Broad River, which flows through the counties of Transylvania, Henderson, Buncombe and Madison. In those counties the disease prevailed many years ago, and perhaps, to some extent, more recently. West of these lie the counties of Haywood, Jackson, Swaine, Macon, Graham, Cherokee and Clay. These are watered, respectively, by the Pigeon, Tuckasigah, Oconee, Luftee, Tennessee, Hiwassee and their tributaries. These rivers have their sources in the northwestern slopes of the Blue Ridge, and flow in a northward direction through the narrow defiles of the Alleghany range into the State of Tennessee, thence to the Ohio river, Mississippi and Gulf of Mexico. These rivers and their tributaries are separated by mountains of no mean elevation. The table-lands of these

counties have an elevation of about two thousand feet above the tide. The crests of the mountains are usually fifteen hundred or two thousand feet higher, saying nothing of their peaks and domes. The slopes from the summit of the mountains to the valleys below are of various degrees of steepness—some almost perpendicular, others beautiful inland plains. The level lands lying near large streams and the gently rolling, hilly lands, are chiefly in cultivation and contain a pretty good population, while the mountainous portions are sparsely settled. In these mountain-gorges there are many deep coves, surrounded on two or three sides so as to exclude the vertical rays of the sun, and for a portion of the year any direct influence of the sun whatever.

The disintegration of rocks from the mountain-sides and the decomposition of vegetable matter for centuries, give these coves a rich, loamy soil, producing annually a luxuriant growth of grass, weeds and vines, and heavily shaded with trees of immense size. In such localities the cattle are supposed to find the poison, whatever it be, that causes the disease called Milk Sickness. Some of these localities are quite near the densely populated valleys, but usually more remote. According to the information I have been able to procure, both during my acquaintance with the disease and for many years previous, even to the first settlement of the country by the whites, the counties of Haywood and Macon (then including Jackson and Swain) suffered more from this disease and from the loss of property than all other sections of our mountain country. From the statements of the early settlers of the country its ravages must have been fearful. And now let the reader pardon a digression. The publication of a treatise I had prepared on this subject several years ago, was suppressed lest it might prove unfavorable to immigration and to the sale of mountain lands in this country. Notwithstanding, Haywood county has made as fair improvements in her agricultural products as any other in the West, and produces more good cattle for market than any county in the State.

My first contact with this disease was in Haywood county forty-three years ago. Previous to that time it was seldom treated by physicians. But few resided in the country, and they at inconvenient distances from the infected localities. And what was still more to be regretted, they were not conversant with the disease, either from reading or observation. The idea was then popular

that doctors knew nothing of the disease, and the patient would fare better in the hands of some kind neighbor than to risk the chances of sending many miles for an inexperienced physician. For several years past, however, medical aid is called for in this, as readily as in any other disease, and the physicians in all these counties meet with uniform success in its treatment. Fortunately for me, in my first cases, the family and friends knew well what was the matter, and no careful diagnosis on my part was necessary in that respect.

The favorable termination of these cases, under circumstances not auspicious, gave me frequent opportunities of observing the disease in its various stages and degrees of development, And although my experience has been more extensive and of longer duration than that of any other physician in our community, I claim no superiority over any of them in a knowledge of the pathology or treatment of this disease, and a prominence in this respect has been given me for many years back by the kind partiality of my professional brethren, as well as other citizens, to which I was not entitled. Yet the facts of experience are due to the profession as a matter of science, especially so to the young physician who may be called on to treat the disease, and also to the cause of suffering humanity.

I shall depart from the usual method, and leave the consideration of the primary cause of this disease to the last, and to a subsequent number.

The *symptoms* by which the disease may be certainly known, and readily distinguished from any other malady—require special attention.

If these shall be so well defined and so clearly stated, that no intelligent observer, especially a physician need ever be mistaken in his diagnosis, my *first* object will have been achieved.

In this, I shall take the liberty of quoting freely from the excellent treatise of Dr. Philips, of N. W. Ohio, not only because of the accuracy of his description and minuteness of his details, but that our physicians in Western North Carolina may recognize the identity of the disease he describes in that far off country, with the one with which we are here familiar.

One of the distinctive features of this disease is the absence of any premonitory symptoms. No chilliness, succeeded by sweating

and slight fevers ; no pain in the head, back and limbs, no general lassitude for days preceding the attack. No critical stages mark its progress, nor any of the signs of convalescence usually met in other diseases. True this is a negative view of the case, but none the less worthy of attention.

“The first symptoms usually manifested are feelings of languor, with muscular weakness and an unusual sense of fatigue, nausea and vomiting. The patient soon seeks a recumbent posture and the disease is rapidly developed.”

These symptoms invariably occur, if the disease amounts to any thing serious, but not always in the same order. Either may precede the others. The pulse is usually slower than normal, only when temporarily excited by efforts to vomit. The skin is invariably dry, and of a purplish hue—frequently corrugated, especially the hands, the feet and the face. The patient complains of heat and will not suffer his arms and legs to remain under cover, although the temperature is seldom above and usually below the natural standard. The head is drawn toward the chest, frequently on the railing of the bedstead, or hanging over it with one arm over the head. The countenance has an apathetic expression. The mind occasionally irritable, but generally in a state of hebetude expressive of utter indifference and abandon ; delirium is a rare symptom. The heart and large arteries appear to be laboring under heavy pressure, and the capillary circulation almost suspended.

“All the secretions and excretions are rapidly diminished.” The bowels are constipated for want of peristaltic action. The patient is usually unable to walk or sit up, and if he should be, he is reluctant to make the effort. If these symptoms do not soon subside, they are followed by more complete prostration, frequent efforts to vomit, cold hands and feet, the eyes partially closed and glossy—or wide open and fixed on one object, stupor, coma and occasionally delirium, and “death steals over the unfortunate victim without a struggle.”

“There are some cases which run an exceedingly mild course, being characterized only by a few day’s debility, loss of appetite, and nausea, with a gradual restoration. Others, like the fulminant form of cerebro-spinal meningitis, completely overwhelm the subject, and death by coma ensues within one or two days from its commencement.”

The quotations are all from Dr. Philips, of Ohio, and they bring the disease as forcibly to our minds as if they had been taken from cases of frequent occurrence among us.

“The breath is fetid and of a peculiar odor.” The breath has a *peculiar* odor, an odor that belongs to nothing else, and where that odor is observed Milk Sickness exists as certainly as light emanates from the sun. I do not consider it fetid however, nor much offensive, but easily distinguished from any other odor.

[To be continued].

RESECTION OF THE FEMUR FOR UNUNITED FRACTURE WITH NECROSIS.

BY W. W. LANE, A. M., M. D., President of the Board of Health,
for New Hanover County, Wilmington, N. C.

John H. Boatwright, aged 32 years, belonging to a Texas cavalry regiment was wounded at the battle of Bentonville by a Minie ball, which penetrated the inside of the leg just above the knee and came out on the opposite side ; he was confined in the hospital at Raleigh and other points for a period of eleven months, under the treatment of the Federal surgeons.

Several abscesses formed from time to time subsequently, but there was no exfoliation of bone at any time.

On the 27th of March, 1877, while engaged in getting shingles he fell from a log to the ground, a distance of three feet, “stiff-legged” as he expressed it. The fall was attended with considerable pain and swelling, but he continued at his usual work ; but on the 31st of March, after having walked nine miles, the bone suddenly gave away and he fell. A physician saw the case soon after, pronounced the femur fractured and set it, using an ordinary straight splint. After a lapse of seven or eight weeks, no union having taken place, and no improvement ensuing, the patient was sent to Wilmington, and put under my care for further treatment.

On examination, with the concurrence and advice of my friends, Drs. Anderson, King and Walker, it was thought advisable to make

another effort to bring about bony union by a readjustment of the parts and the application of the most approved supports ; the limb was accordingly well bandaged and placed in Byrd's posterior wire splint, and suspended after the manner of Smith's anterior apparatus.

It was thus allowed to remain over eight weeks, when the splints were removed and the fracture found still ununited, and with no apparent prospects of union. The spirits of the patient through all this long and tedious confinement were remarkably good, and his general health excellent.

It being evident now, that the bone was diseased, it was a question of amputation or resection, and after due consideration, it was decided to make an effort to save the limb by the operation of resection.

On the 26th of July, the patient having been given a glass of whiskey, and being well under the influence of chloroform, Esmarch's elastic bandage was applied from the toes to the upper third of the thigh, where the tourniquet, consisting of a piece of elastic tubing, was secured around the limb.

I then made an incision about six inches in length, between the borders of the rectus and vastus internus muscles, and on exposing the bone I found the upper portion denuded of its periosteum four inches or more. This part was taken off with the saw, as was also a half inch or more of the lower fragment found in a similar condition. The two ends of the bone were then placed in apposition and then held together by means of a silver wire carried through holes pierced in each end of the bone.

I was deprived, however, in some measure, of the aid expected to be derived by this means, by the parting of the wire in the efforts of the patient in recovering from the effects of the anesthetic.

The application of Esmarch's apparatus was very satisfactory in this case, and added much, in my opinion, to the successful issue of the operation, there being so little blood lost there was scarcely any use for the sponge.

The operation was necessarily a little slow, and never before having used this method in surgical operations, I was somewhat apprehensive of a subsequent healthy restoration of the circulation, but no untoward accident occurred to mar the successful termination. I was much indebted to my friends, Drs. Anderson, King and Walker who were present, for their kindly assistance and counsel.

After the operation, the limb was placed in a hollow wooden splint with a screw-joint at the knee, and suspended as before with Smith's Anterior splint, the wound healed kindly and the sutures were removed in eight or ten days.

About the middle of September, all the appliances were removed and it was ascertained that the callous thrown out was becoming firm and the patient could move his leg about a little. About this time an abscess formed under the leg below the wound which was opened, but there was no further inflammation.

The accompanying figure from a photograph of the patient after discharge from the hospital, showing small degree of deformity by shortening, notwithstanding that $5\frac{1}{2}$ inches of the femur were removed. The patient was now allowed to move about on his crutches, and made to

bear his weight from time to time on the limb which improved in strength and firmness each day, though the joint was partially ankylosed.

He was discharged and sent home on the 18th of October, with every prospect of having a useful limb restored to him.

I am just in receipt of a letter from Mr. Boatwright, dated December 25th, telling me that his general health is good, and that he is gradually regaining the use of his leg, and requesting me to get a cork bottom shoe for him.

SELECTED PAPERS.

NERVE-STRETCHING IN NEURALGIA, EPILEPSY AND TRAUMATIC TETANUS.

As a surgical procedure in certain diseases, nerve-stretching dates in 1872. Dr. Paul Vogt has recently issued a volume on the subject, being the first systematic contribution to this procedure in surgery.

We will call the attention only to the most practical parts of the work in question, referring those specially interested to the complete treatise.

1. When we have to deal with a neuralgia of peripheral origin affecting a purely *sensory* nerve, and one which has resisted all previous treatment, and which we cannot influence by electrō-therapeutical means, a case in which no special local measures are indicated (removal of a scar, foreign body, or morbid growth,) *then neurotomy of the affected nerve, in combination with simultaneous stretching, both centripetally and centrifugally, is indicated.* By means of this combination, we dispose of the peripheral irritation, or, at least, we get an interruption of communication with the nervous centre, and also a diminution of the irritability in the course of the entire nerve-trunk since the action of nerve-stretching goes much further in this direction than simple division of a nerve; and also from the circulatory changes there results an alteration in the nutrition—altered though it already is—of the nerve. Thus there is a combination of effects, which must almost necessarily produce a favorable influence on the disease, provided always that the *secondary changes in the nerve-centres* are not altogether beyond the possibilities of resolution. This operation, of course, is only admissible for sensory nerves.

2. Nerve stretching, alone will be indicated under analogous conditions for *mixed* nerves. If we are called to treat a neuralgic

affection, we should, of course, remove all local irritations by local measures (such as removing or detaching scars in the neighborhood of nerves), and at the same time by "stretching" seek to paralyze the result of the previous irritation. We might even, under certain circumstances, proceed to stretch the nerve-trunk without adopting the above mentioned preliminary measures, when all medicinal and electro-therapeutical measures had previously failed. In the latter case, we should seek to get at the nerve at the nearest possible point to its centre; and by vigorous stretching endeavor to influence the local condition also.

3. Neurotomy alone is indicated in neuralgic affections of a *very localised nature*, where a *subcutaneous* division of the affected nerve-twigg would suffice, and where the laying bare of the nerve trunk would scarcely be justifiable. In this group may be placed neuralgia of single sensory twigs in the case of extensive, and hence not easily extirpated, scars, tumors and the like.

In Epilepsy.—The cases of epilepsy to which this plan of treatment is adapted, are those which we call *reflex epilepsy*, depending on some appreciable or fairly obvious injury of a peripheral nerve distribution. There is on record a large number of cases where the removal of scars, neurotomy, etc., have led to a perfect cure. The following would seem to be an exceedingly suitable case for the operation:—A man had a small tumor removed from the cheek. The wound only closed slowly. Shortly afterwards, after any great exertions or excitement, he began to experience a feeling of heat above the scar, and occasionally a twitching spasm in the muscles of the neck. These symptoms became aggravated after a time, and now he is the subject of well marked epileptic attacks. On examining the local conditions more thoroughly, a scar, about the size of a florin, is found in front of and beneath the angle of the right jaw. It is not painful or tender, and nothing abnormal is found in the surrounding parts. But there is one point, which is painful, from which twitchings seem to start. Topographically it corresponds exactly to the point of exit of the *nervus cutaneous colli superior et medius* of the cervical plexus. The author believes that he has found the source of the peripheral irritation, and has advised stretching of the nerve-trunk where the twig arises. The cases are to be recorded later on. In all cases, however, the indications must be exact and precise if we would be successful.

TRAUMATIC TETANUS.

Contrary to the advice given in the two previous diseases, we must, in this, proceed to operation at once, and not wait until all therapeutic and anæsthetic measures have been tried. If needs be, order these measures in addition to the nerve-stretching, but not in its stead. The surgical treatment may be both local and central. The cases, however, where any active local treatment can be of avail, are those in which no important changes in the central nervous system have shown themselves. The period during which the local treatment might be of service is exceedingly short. In some patients the central manifestations come on simultaneously with the disease, and here, of course, local treatment would not be of any avail whatever. As compared with all previous operative interference, nerve-stretching accomplishes much more, is a harmless operation if it even do not succeed, and does not require a solution of continuity in the nerve. In order to sum up, then, we may state that the prominent symptoms which call for this treatment are *exalted irritability*, and *disturbed function due to a disturbed blood circulation at the peripheral termination of the nerve*.

TECHNOLOGY OF THE OPERATION.—The actual accomplishment of such an operation appears very simple, and yet from a study of all the published details, it is clear that the final success depends very much on attention to small matters, which sometimes are apt to be forgotten. The operation may be divided in three stages:—
1. Laying bare the nerve within its sheath. 2. Drawing forwards and stretching the nerve. 3. Reposition and application of dressings. The first act of the operation is a most important one. The second act of the operation may be performed either manually or instrumentally. For the drawing forward of the nerve, one naturally uses a blunted hook or an elevator, or for a small nerve, an ordinary aneurism needle. The actual stretching is best accomplished by passing the forefinger, appropriately curved, beneath the nerve, and using it in conjunction with the thumb. By this means we secure as much force as is necessary, provided, we place the limb in a suitable position. In the case of small nerves it would be impossible to pass the finger under them, and hence an *elastic* traction can be exercised without the risk of crushing, or otherwise injuring the nerve itself. The last part is the dressing. If the stretched

nerve does not recede when the limb is placed back in its normal position, the operator must gently tack in the nerve into its bed. A small bit of drainage tube is to be placed into the bottom of the wound, which may then be closed by a few stitches. Lister's dressing and spray ought to be used in these cases, as rapid union and a small scar must be tried for."—*Medical Times and Gazette*.

OPIUM AND BROMIDE OF POTASSIUM IN HEART DISEASE.

Some time since some one called digitalis the quinine of the heart. But digitalis is a precious remedy which is sometimes abused. It has well-marked contra-indications. In heart diseases characterised by aortic insufficiency and obstruction, digitalis is not indicated; a series of experiments made by M. Gubler showing the power which opiates have in these cases. It is above all in mitral affections that opium is contra-indicated; it is useful, on the contrary, in affections of the aortic orifice.

Dr. Henry Huchard has sought to explain the therapeutic action of opium by attributing to it a *hyperæmiant* action on the brain. Without committing ourselves to this explanation, we shall content ourselves with making known the mode of administration.

Preference should be given to preparations of morphia, and especially to the subcutaneous injection of morphia; experience on this point having amply demonstrated, on the one hand, that large doses of this remedy only are successful, on the other hand, that the morphia injected into the cellular tissue is endowed with an action not only more rapid, but slightly differing from that which it possesses when introduced by the stomach.

At other times M. Gubler prescribed tincture of thebaia in five drop doses, three times a day.

In the *Revue Clinique de Bologne*, Dr. Giuseppe Angrisani has come to the following conclusions with regard to the administration of bromide of potassium: the bromide has no action on the muscular fibres of the heart as digitalis has, and the latter has no action on

the arteries ; the bromide is a remedy most fitting for correcting functional disturbances of the heart, as frequency, intermitting, arhythm, &c. Whatever be the state of the myocardium, it modifies advantageously and quickly angina pectoris and palpitations, when they are simple neuroses. In cases depending on profound anatomico-pathological lesions of the heart and its vessels, or on compression, the bromide succeeds in producing a more or less lasting improvement. From these facts we may conclude in favor of *opium* when there is aortic lesion ; *bromide of potassium* when there is neurosis ; *digitalis* in other cases.—*Paris Medical*, August 2nd, 1877.

NORMAL OVARIOTOMY—BATTEY'S OPERATION— OOPHOROTOMY.

BY J. MARION SIMS, M. D.

The criticism in your issue (*Medical Times and Gazette*,) of October 27th, on "normal ovariectomy," so called, is both just and temperate. From a letter recently received from Dr. Battey, I learn that he has now performed this operation twelve times, with two deaths. I have performed it seven times with one death.

The success of the operation so far is not what we expected ; but we hope for better results hereafter. As I am at an early day to bring this subject formally and fully before the profession, I shall here confine my remarks to the name by which we should recognize this operation.

Dr. Robert Battey, of Rome, in Georgia, U. S. A., based this operation on the theory of bringing about change of life by extirpating the ovaries, and thereby arresting the menstrual molimen. The name he gave his operation—normal ovariectomy—has been much and justly criticised in my own country. Two or three years ago, Dr. Battey asked me to give his operation a name, as the profession objected so much to the one he had chosen for it. He called it "normal ovariectomy," because he supposed he was extirpating a normal ovary—an ovary in a normal state, and of normal size.

But all the ovaries that Battey and myself have removed by his operation were found to be in abnormal or diseased condition. There was a radical organic change of structure in each and every one we have examined—a change easily seen by the eye without the aid of microscope. Hence the term “normal ovariectomy” is incorrect, inappropriate, and we should get rid of it.

This operation, like many others that have led to great results, has a little history of its own, which is by no means uninteresting.

Some years ago, Dr. Battey saw a young lady, aged twenty-one, die from the effects of an unrelieved menstrual molimen. Then he asked himself the question, “Would it not be possible to cure such cases by bringing about an artificial menopause by the extirpation of the ovaries?” A few years after this he saw another young lady, aged thirty, in a like suffering condition, who, after prolonged and fruitless efforts on his part, was about to pass away, worn out with epileptiform convulsions, vicarious hæmorrhages, pelvic hæmatocœles, and pelvic inflammations and abscesses. The case was evidently absolutely hopeless under the ordinary methods of treatment. Death was imminent; and Battey proposed, as a *dernier ressort*, the extirpation of the ovaries. The patient gladly accepted his proposition. Battey, living in a little country town, had no great masters in medicine to stand by him; so he wrote to many of the leading obstetricians and gynæcologists of the country, stating his views, and asking their advice on his proposed operation. But he received no encouragement whatever from any of them. He explained all this to his long-suffering patient. But she was not at all discouraged, and begged Dr. Battey to perform his operation. He operated on her in August, 1872, removing both ovaries by abdominal incision. Fortunately his patient recovered. Her recovery was tedious. But the cure was perfect, and remains so to this day. Her epilepsy, hæmatocœles, her pelvic cellulitis, abscesses and vicarious hæmorrhages—all disappeared with the disappearance of the menstrual molimen; and she is now a useful member of society. If we except the heroic operations of Ephraim McDowell, in the backwoods of Kentucky, in 1809, for the removal of ovarian tumours, I do not think the annals of medicine can produce an example of higher moral fortitude than that shown by Battey, when he, assuming all the responsibility, which was of the gravest character, dared to perform this hazardous operation, not only without the approval, but

against the advice, of his brethren, and, that, too, in an obscure little country town, on a lady in the higher walks of life.

We may do heroic and untried operations in large hospitals in great cities, and, if the result is unfortunate, the responsibility is divided with our *confrères*, and in the whirl of life it is remembered by a few, but soon forgotten by the many. But in a little village of two or three thousand inhabitants, such rashness as it would be called, might damage a man's reputation seriously even if attended with success, and would surely ruin it if unsuccessful.

I would like to see this operation recognized by the profession as "Battey's operation." I think he is entitled to that honor. He was the first to grasp, in its widest range, the influence and effects upon the general system of what he calls an "unrelieved menstrual molimen." He was the first to suggest a method of cure. He was the first to carry out his own suggestion, and to perform an operation for the cure of a disease that had never been cured before. He performed the operation on his own responsibility, without the co-operative aid of a single member of the profession. He has demonstrated the correctness of the principles upon which it was based, and proved its success in practice. He has established a precedent that may now be followed with safety, and opened up a new field of observation that promises results as grand as those now achieved by ovariectomy. He has raised sorrowing women from a perfect slough of despond; from indescribable suffering; from epileptic convulsion; from repeated pelvic inflammations, hæmatocèles and abscesses; from vicarious and alarming hæmorrhages; from threatened insanity; and in some instances from impending and certain death; and restored them to health, to friends, to usefulness, and therefore to happiness.

We have precedents enough for naming diseases and operations for those who have been the first to discover and describe the one, or to originate and perform the other. I may name Bright's disease, Addison's disease, Colles' fracture, the Hunterian operation, Syme's operation, Pirogoff's operation, Græfe's operation, etc. The moment they are named, we recognise each operation, and the manner of executing it in its manifest details. Let us honor Battey by calling this "Battey's operation."

It would be easy enough to give it a classical name to distinguish it from ovariectomy. We should continue to apply the term "ovario-

tomy" to the removal of ovarian tumours, properly speaking; and we might coin the term "öophorotomy" to designate it as Battey's operation, but for myself I prefer to designate it as Battey's operation. He has won the honor, and let him wear it. The difficulty already encountered in finding a name sufficiently distinctive and characteristic of this operation justifies us in calling it Battey's operation.

I appeal to my professional brethren in the Old World to join in honoring the profession in the New World by affixing the name of Battey to the operation, which he so ingeniously worked out, and has so heroically and successfully established.—*Paris, 2, Rue d'Albe.*

PROGNOSIS AND TREATMENT OF DIPHTHERIA.

Dr. Lewis Smith, Clinical Professor of Diseases of Children at Bellevue Medical College, observes (*American Journal of Medical Sciences*, October) that the endemic persistence of this disease in some localities, as New York, and its frequent epidemic outbreaks in country villages and towns, have aroused great attention as to its nature and treatment. No disease also, he adds, stands more in need of all the light which science and experience can throw upon it, not only on account of the divergence of views which prevails respecting it, but because of the frequency with which the prognosis is belied. This uncertainty of prognosis, he believes, depends much upon the fact that diphtheria terminates fatally in several distinct ways, so that while the patient may seem safe with respect to the more manifest and common conditions of danger, a fatal result may still occur from some unseen and unexpected cause.

Death may result from (1) diphtheritic blood-poisoning; probably also from (2) septic poisoning, produced by absorption from the under surface of decomposing pseudo-membrane—especially when this is extensive, deeply embedded, and attended by an offensive effluvium. Cervical cellulitis and adenitis, which may cause very considerable swelling of the neck, appear to be often, if not usually,

due to septic absorption from the lower surface, the inflammation extending from the absorbents to the glands and connective tissue. Considerable swelling of the neck, therefore, seldom occurs in diphtheria or scarlatina without manifest symptoms of toxæmia, and is to be regarded as a sign of its presence. (3) Obstructive laryngitis; (4) uræmia; (5) sudden failure of the heart's action, either from the anæmia and general feebleness, from granulo-fatty degeneration of the muscular fibres of the heart, which is liable to occur in all infectious diseases of a malignant type; or from ante-mortem heart-clots. (6) Suddenly developed passive congestion and œdema of the lungs, probably due to feebleness of the heart's action, or to paralysis of the respiratory muscles. Death may occur from this cause during what seems to be convalescence. The physician is less likely to err who bears in mind the possibility of these various terminations; and Dr. Smith believes that the condition of the urine is too infrequently and too superficially examined, seeing that it often contains a large quantity of albumen.

“Among the symptoms which render the prognosis unfavorable are repugnance to food, vomiting, pallor, with progressive weakness, and emaciation from the blood-poisoning; a large amount of albumen, with casts in the urine, showing uræmia, to which the vomiting is sometimes, but not always, attributable; a free discharge from the nostrils, or occlusion of them by inflammatory thickening and exudation, showing that a considerable portion of the Schneiderian membrane is involved; hæmorrhage from the mouth or nostrils; and obstructed respiration. One, at least, of these has been present in most of the fatal cases which have fallen under my observation.”

It is remarkable, Dr. Smith observes, that concerning a disease which has been so long under wide-spread and able observation, such wide discrepancy of opinion as to treatment prevails. This has arisen in part by the different views taken of the nature of the disease, but still more is due to the unreliability of the statistics of treatment, owing to the very varying types the disease presents even in the same epidemic, so that while some cases resist all measures, others scarcely require treatment at all. He believes that the germ-theory of diphtheria has done immense harm by concentrating attention so much on local and general antiseptic treatment, which, as far as his experience goes, proves of little use; and he is of opinion that the fact of the treatise in Ziemssen's Cyclopædia, which propa-

gates this doctrine, having been published before Sanné's more useful book, has led to great mischief. Experience has, however, brought on a reaction, and practitioners are beginning to learn that constitutional treatment is of as paramount importance in diphtheria as in scarlatina. As the result of his own large experience, he lays down the following propositions :—1. In ordinary cases the poisonous principle of diphtheria enters the blood through the lungs, and after incubation, varying from a few hours to seven or eight days, gives rise to the symptom of the disease. 2. Facts do not justify the belief that the system can be protected by antiseptic or preservative medicines, given internally. 3. There is no known antidote for diphtheria, in the sense in which quinia is an antidote for malarial disease. 4. Diphtheria, like erysipelas, has no fixed duration. It may cease in two or three days, or continue for as many weeks, the specific poison acting more intensely at the commencement than at a later period ; so that diphtheritic inflammation—as laryngitis, *e. g.*—is more severe and dangerous at an early period than when the disease has continued a few days. 5. The indication of treatment is to sustain the patient by most nutritious diet, tonics, and stimulants, employing other measures as adjuvants as the indications arise, the same rules of treatment being for the most part appropriate as are applicable in scarlatina. Local treatment should be unirritating and designed to prevent putrefactive changes and septic poisoning. Irritants which produce pain lasting more than a few minutes, or which increase the area or degree of redness, are hurtful, and increase the extent and thickness of the pseudo-membranes.

The most nutritious and easily digested food should be given, the preservation of the patient's inclination for food being of vital importance. Beef-tea or the expressed juice of meat, milk, with farinaceous substances, etc., should be given every two or three hours, or to the full extent without disturbing digestion. Failure of appetite and refusal of food are justly regarded as most unfavorable signs. In malignant diphtheria or scarlatina patients are allowed sometimes to slumber too long without nutriment. It is the slumber of toxæmia, and should be interrupted by feeding at stated times. *Stimuli*, as observed by Sanné, are indicated in proportion to the gravity of the case ; and while mild cases do well without alcohol, this is required in all cases of a severe type, and should be given in large and frequent doses, wherever pallor or loss of appetite, or of

strength and flesh, indicates danger. Of *tonics*, none answer the purpose better than cinchona and quinia. Concerning the doses of the latter, the greatest difference of opinion prevails, according as its antipyretic or its tonic effects are sought to be obtained. But high febrile action calling for antipyretic doses of three, five, or more grains, are seldom observed after the first forty-eight hours, while at a subsequent period the tonic dose or two grains every two or four hours will be found sufficient. Great difference of practice also prevails with respect to iron, some using it exclusively in large doses, while others employ moderate doses as an adjuvant to vegetable tonics. The formula which Dr. Smith prefers, say for a child five years old, is the following:—*R.* Quiniæ sulph. 3 ss., elixir adjuvantis or elixir taraxaci co. ℥ ij. Give one teaspoonful every two or four hours, and one teaspoonful of the following hourly between—*R.* Tinct. ferri chlor. 3 ij., pot. chlor. 3 ij., syrup ℥ iv. The tonic effect of the iron is not impaired by the chlorate of potass, which is added on account of its action on the inflamed surface. The citrate of iron and ammonia alone, or combined with carbonate of ammonia, may be given in two-grain doses, in syrup, instead of the above, when the inflammation of the fauces has considerably abated or is moderate. As the disease begins to abate, the intervals between the doses may be lengthened, but the tonic should not be entirely discontinued until the patient is far advanced in recovery, on account of the dangerous sequelæ which originate in an impoverished condition of the blood.

The object in *local treatment* should be to reduce the inflammation of the mucous surfaces, and destroy the diphtheritic poison and contagious properties in the pseudo-membrane, and to destroy the septic poison, and prevent its absorption should any form. Forcible removal of the pseudo-membrane, irritating applications, the use of a sponge or other rough instrument for making the applications, should be avoided as likely to do harm. These should be made with a large camel's hair pencil, or (better for most mixtures employed) with the atomiser. The hand atomiser, is very useful, but the constant spray of the steam atomiser is very effectual, and is preferable in some cases. Dr. Smith employs the following mixture:—1. Salicylic acid ℥ ss., glycerine ℥ ij., lime-water ℥ viij. 2. Carbolic acid gtt. xxxij., glycerine ℥ ij., lime-water ℥ vj. 3. Carbolic acid gtt. xxxij., chlorate of potash 3 iij., glycerine 3 iij.,

water $\bar{\text{z}}$ v. Half a dozen or a dozen compressions of the bulb of the hand atomiser cover the surface of the throat more effectually with the liquid than can be done by several applications of the brush, and it is usually not dreaded by the patient. Diminution in size of the pseudo-membrane under the use of the spray is a favorable sign ; but if it do not diminish, its presence can do little harm if properly disinfected. In many cases the spray suffices for local treatment, but this mixture (carbolic acid gtt. viij., liq. ferri sub-sulph. $\bar{\text{z}}$ ij.- $\bar{\text{z}}$ iij., glycerine $\bar{\text{z}}$ j.), applied by a large camel's hair pencil, is also very effectual, converting the pseudo-membrane into an inert mass, and putting a stop to all movements of the bacteria which swarm in it. It may be used two or three times a day between the spraying, or oftener without this. *Pseudo-membranous laryngitis*, the most formidable symptom of diphtheria, is best treated by the spray. Of twenty-five cases treated by Dr. Smith, seven recovered by inhalation of spray, and two by tracheotomy. When the *Schneiderian membrane* is especially affected, being more sensitive than the fauces, it requires a milder treatment. The best consists in injecting into the nostrils, by means of a small syringe, every third or fourth hour, one or two teaspoonfuls of a mixture formed of carbolic acid gtt. xxxiv., glycerine $\bar{\text{z}}$ ij., and water $\bar{\text{z}}$ vj., using it of the temperature of the body, the head being thrown back, and the eyes covered with a cloth.

We are indebted to the *Medical Times and Gazette* for this synopsis of Dr. Smith's article and copy it at length, to induce those who have not seen it to read the entire article, as it is worthy of attentive consideration.

CORRESPONDENCE.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES.

PARIS, December 1st, 1877.

To the Editors of the North Carolina Medical Journal :

GENTLEMEN :—There is but little activity in the medical world of Paris at the present moment. The minds of all Frenchmen are

so absorbed in politics for the time being, as to preclude a special devotion to science in any of its branches. Professors lecture and students listen as if they were thinking of something more important than the subject matter before them, as if they were expecting momentarily, to hear the tocsin of a new revolution involving the fate of their country, or perhaps, of society itself. Bulletins from Versailles have more charms for the fraternity, than reports from Hotel Dieu ; while the debates in the Chambers are read with far greater avidity than the discussions in the Academy.

This excitement assumed rather a dangerous phase at the recent opening of the medical school. When Chauffard, Professor of Pathology and General Therapeutics, made his appearance before the class, he was received in the most boisterous and insulting manner possible. The students sang, shouted, hissed, indulged in ribald jests, and, despite his patient and persistent efforts to proceed, positively refused to give him a hearing. In America, such a demonstration would have led to the immediate resignation of the Professor ; but they manage things differently in France. On the succeeding day, all the students save those of the fourth class—candidates for the degree on the eve of examination—were excluded ; and as the number of these is limited and each individual realized that he was being “marked and noted,” profound silence prevailed, and the Professor delivered his lecture without interruption. Chauffard, though a gentleman of unexceptional character, and a physician of great learning, belongs to the “Church Party,” which in these radical times is considered damnable ; and, hence, this outrage upon him.

It is, however, possible that another element entered into this hostility to him. As the Chairman of the Advisory Committee of Public Instruction, he has recommended the authority action, *i. e.* the granting of the right to practice medicine in France, to at least, one foreign physician within the last two years, and as it seems to be the settled policy of not an inconsiderable number of the native fraternity to refuse this concession to all aliens, and, indeed, to drive those who are already domiciled here, out of the country, it may be that he was specially selected for an unfavorable demonstration, because of his liberality in this regard.

This leads me to a matter concerning which, I have long desired

to say a word to the profession at home. Since my residence in France, I have received a great number of letters from physicians making enquiries in regard to the possibility of a residence abroad. American physicians, as a general rule, succeed very well in Europe, and there are several localities in which they are greatly needed at this present moment. There is, however, a very serious obstacle in the way of those who would avail themselves of these advantages. Foreigners are not permitted to practice medicine in Europe, without first having stood a critical examination, conducted in the language of the country in which they seek a residence, or having obtained a special decree from its government granting the requisite authorization.

Although in France the way is always open to success through the schools, the authorization is accorded very rarely and under the most exceptional circumstances. When, as the Surgeon-General of the Egyptian Army, I secured this authorization, the Secretary of the Faculty informed me that the *rule* for several years past had been to peremptorily reject *all* such applications, and I know that it has not been granted in a single instance since then, though repeatedly asked for by parties who brought every possible influence to bear in their favor. So strong is the feeling in regard to foreign physicians, that during the last session of the Chamber of Deputies, a bill was introduced demanding the expulsions of all aliens who had not graduated in due form in the Medical School of France and rendering an authorization impossible in the future. Had it not been for the earnest protest of the English government, and the prompt action of the French ministry, the measure would have passed unchallenged, and we should have been driven summarily out of France, notwithstanding our original compliance with the requirements of all existing laws. You will, therefore, perceive that it is worse than useless for an American physician to think of coming here with reference to the practice of medicine, unless he is prepared to matriculate at the Medical school and to go regularly through its courses.

From what I can learn, the same difficulties present themselves throughout Europe, though, perhaps, to a less serious extent in Italy than elsewhere. There the authorities are said to be rather more liberal in dealing with the diplomas of other countries, and it

is *possible* to secure an authorization from them without having to submit to an examination in a foreign tongue. As there is but a single American physician residing in Rome and not one in Naples, cities to which immense crowds of our compatriots resort during the winter months, it may be worth the while of some of your readers to investigate this matter further. Some money, much professional experience, and a good address are the desiderata upon which to base calculations as to the success of such a venture.

Since the Khedive's pecuniary embarrassments, he has been constrained to abandon the policy of employing foreigners in his service, and, as without government employment and pay no physician can hope to sustain himself in Egypt, it is folly to give a thought to that country.

A great number of our surgeons have applied to me for positions in the Turkish army, indeed, every mail from America brings me piles of letters with reference to this subject. It is true, that authority was given me some months since to select a certain number of medical men for the Ottoman army, but it is equally true, that, after learning what has been the experience of the only two gentlemen actually sent there, I determined to make no more appointments. As to what Turkey would do, if money was abundant, I know very well ; but unless a man is prepared to defray his own expenses to Constantinople and live after arriving there on the *promise* of one hundred dollars per month, he had better remain at home. At any rate, I shall not be instrumental in having any more of my compatriots try the experiment of serving in the Sultan's army.

Salicylic acid still constitutes the theme of discussion both in the Academy of Medicine and in the Clinical Society of Paris. Professor Sée seems to be the chief champion of this new remedy. According to his teachings it is *the great specific* in gout, rheumatism and rheumatic gout ; while it may be used with especial benefit in typhoid fever, erysipelas, malarial fever, small-pox and all affections in the clinical history of which *ferments* have a prominent place. He gives it alone or in combination with soda, *heroically*, in large and frequently repeated doses, and with marvellous results, so marvellous, in fact, that Ricord, who had seen some of his cases, was constrained to protest against his conclusions and to style him an enthusiast and a dreamer. Although it is evident that Sée speaks

more for professional notoriety than in the interest of science, he has certainly demonstrated that salicylic acid has a far more extensive range of applicability than was previously supposed, and that it is an exceedingly potent and valuable remedy.

All who have employed salicylic acid must have noticed that it agrees with some patients far better than with others, that there is a certain percentage of individuals upon whom it immediately produces toxic effects. At a recent meeting of the Clinical Society of Paris, M. Bouchard in discussing a case of this kind, reported by a colleague, explained the anomaly by saying, that, under such circumstances, the agent was not eliminated by the kidneys, as is naturally the case, and that the intoxication which manifests itself indicates some disease or disturbance of those organs. He, therefore, insists upon the following considerations in actual practice, viz: not to prescribe salicylic acid and its preparation in cases where renal disease exists, since they consequently accumulate in the system, and insure the speedy development of toxic symptoms: to bear in mind that the non-elimination of salicylic acid and its preparations, *i. e.* the development of toxic symptoms, indicates an impermeability of the kidney, even when the ordinary signs of nephritic disease are absent. My own experience confirms these conclusions; for I have found that in albuminuria salicylic acid is not supported and really seems to intensify the disease.

M. Peter, who is one of the best observers in Paris, also called attention to the fact that the pulse always becomes notably slower when the full effects of this remedy has been induced, thereby showing that it exerts a direct influence either on the heart itself or on the cardiac filaments of the pneumogastric nerve. This fact readily accounts for the great prostration, and even sudden death, which has followed the too liberal administration of salicylic acid in certain instances; and supplies an invaluable hint in regard to its employment under all circumstances.

Quite a lively discussion has just occurred in the Academy of Medicine upon a proposition made by the Municipal Council of Paris, to appropriate funds for a thorough scientific investigation of the subject of artificial alimentation. M. Devilliers, representing the commission of Infantile Hygiene, combatted the proposed investigation upon the grounds that there was danger of inducing parents to neglect their offspring and that the public funds had

better be expended in prizes for the encouragement of nursing mothers and those who properly cared for their children. Although Guérin and Colin took the opposite view and insisted that the interest of science and humanity alike demanded a thorough elucidation of this question, since circumstances made it one of practical import. The Academy refused the investigation by a large majority. Surely, in a country in which so many children have to rely upon artificial means for their chances of life, and in view of the frightful mortality which consequently ensues, the decision of these Academicians does seem a little overstrained and somewhat sentimental. If their philanthropy were made to assume a practical form and to illustrate itself in a persistent opposition to the "Sages-femmes," who do most of the obstetrical work, legitimate and illegitimate, in this country, and through whose instrumentality the business of rearing children artificially is principally carried on their sensitiveness to the alleged immoral tendency of the proposition submitted to their consideration, would be more respected and relied upon.

As this letter has already been made much longer than I had originally intended, I must bring it to a conclusion, and reserve such other matters of scientific interest as I had purposed to incorporate in it, for some future occasion.

I am, very truly yours, &c.,

EDWARD WARREN, M. D., C. M.

OUR NEW YORK LETTER.

NEW YORK, December 10th, 1877.

Your correspondent is prevented by physical disability from sending a full report of matters of interest in the metropolis. It is proposed, however, to devote much time in the future to the collection and elaboration of medical news, so that your readers may be promptly informed of events as they transpire.

I find that the *esprit de corps*, which is really solid in the profession here, and which ensures full meetings, and keeps up in the members a lively interest in the *res gestæ*, is nourished largely

by symposial agencies, a method, which struggling societies elsewhere might imitate with good hopes of fruitful results. This applies, however, more particularly to the various associations of specialists, some of which are very exclusive, and not, certainly, to the great and ancient society of the country of New York, which lives and flourishes from the large number of eminent and able men who contribute much of their best work to its proceedings. Gray beards and bent forms do not think it useless to them or beneath their dignity to attend, and few meetings of this society are dull for want of members present, as many as 150 or 200 sometimes occupying the benches. It is true the "papers" read are not all of a great or even high merit, but most of them, from the ready access which the writers have, at the various libraries, to sources of statistical knowledge are richer in such details than can be expected from an essayist before the average provincial society.

The hospitals likewise are as full of varied clinical material which serves to supply apt illustration, and to furnish hints for the elaboration of lines of thought, that no "paper," if its author is at all industrious, should fail to set its hearers to thinking. But the discussions are not always equal to the opportunity here, as elsewhere, the writer is generally the *fullest* man for the evening, on the topic involved; and it not infrequently happens that rapid utterances or lofty flights and ventures in theorizing, fail to receive the attack they so generously invite. Some of us may take comfort from this! One notices too that the participants in the discussions are mainly the hospital men, the plodding practitioner from timidity or inexperience, being usually conspicuous by his silence.

In the County Medical Society, which is presided over by Dr. J. C. Peters, two papers of marked ability have lately been presented, which must enrich the literature of their respective subjects; one by Dr. Loring and one by Dr. Weir.

Dr. L. returns for the hundredth time to the inquire into the productive agencies of myopia, reaching conclusions quite orthodox in the light of the present state of our knowledge.

They show that heredity is not to be excluded as one of the causes, though it is not a predominant one, but that faulty methods of educating children must be held chiefly responsible for the increasing numbers of myopes. This is a very grave, though, doubt-

less just charge, in its relation to civilization, and demands the promptest and most earnest attention of sanitarians and scientists. The proximate causes are a stooping posture at study, producing congestion of the head, the strong tension entailed by convergence at close distances, and a general laxity of fibres which involving also the ocular tunics permits their distension posteriorly. These views are not new, but they have been practically disregarded in the lessons they should teach to those who call themselves teachers.

The best statistics, which, of course, further research will materially affect, show that the percentage of myopes in America (New York), among school children, under 21 years of age, is nearly 27, which probably is an under estimate, differing as it does, so widely from the Russian and German tables, which show respectively 42.8 and 62.1. This is clearly a matter for your own State Board of Health to take cognizance of.

I have said that Dr. Loring's paper was an able one, and so it must have been, since he is *primus inter pares* in his knowledge of the subject; but it presented points and theses which certainly should have elicited contrariety of opinion; the general ability and perfection of his argument, however, probably silenced contradiction, a singular fact considering the "giants" present.

Dr. Weir's paper, the other one alluded to, presented a complete summary of the claims of antiseptic surgery, entering fully into American and European statistics which demonstrate so conclusively its superiority in dealing with open wounds as to afford some excuse for his enthusiastic declaration that it should place the name of Lister above that of the discoverer of anæsthesia. As this latter individual is variously named Wells, Morton, Long and Simpson, each must share the honor of the discovery, and if the whole merit be represented by x , each is entitled $\frac{x}{4}$. The whole quantity of merit is Lister's device may be greater than $\frac{x}{4}$, but hardly greater than x . You will note that this method of estimating abstract and relative degrees is similar to that so highly urged by Addison, hence very classic. But joking aside, there seems to be little doubt that one of the highest places in the temple of fame will be awarded to LISTER, and from which there is small danger of ousting him, since his paternity of antiseptic surgery is too well known to be disputed.

Dr. Weir's description of the system was as by one having

thorough master of it, lucid in diction, logically clear, statistically full, and withal so modest as to confer much grace upon it. All the various materials, carbolized gauze, lint, cotton, tow, cat-gut, drainage tubes, salicylic and boric preparations, sharp spoon for renewing old sinuses, pure phenol (declared to be more efficacious than carbolic acid) were exhibited and passed around for close inspection. Various methods of dealing with fractures, spiculæ, sequestra, denuded bone, &c., &c., were clearly described, and very interesting cases cited in which granulating surfaces were scraped to secure blood clots which, under the antiseptic influence, rapidly organized into living tissue, covering bare bone, and supplying gaps in continuity.

The discussion developed in almost universal agreement, among members, and showed that the system was largely followed in our hospitals. Professor Stephen Smith spoke of it as introducing a new era in surgery, and of its promise to give us additional power to save life and to preserve limbs and parts which accident and disease formerly required to be sacrificed. Now, he thinks, joints may be freely explored, compound fracture repaired without amputation, cavities of the trunk laid open to examine a wounded viscus, or for the relief of ileus or hernia.

The system is largely employed in ovariectomy. Dr. Langston thought it all very well, but pointed out that the best statistics of antiseptic surgery could be fairly matched by those of many surgeons under older methods; said that the great care and preciseness of detail which Lister and his followers strictly enjoin practically prevents its general adoption. He cited Nussbaum, one of its greatest advocates as taking a full year of doubt and failure to learn how Lister "did this thing," showed that Lister himself was continually making changes in the method, and said that these facts suggested some insuperable difficulty, in the perfected application which for the present would relegate it to the trained staffs of the best appointed hospitals. He did not condemn the system, however, and it will, I think, in spite of the difficulties which now surround it, win its way to recognition as one of the most estimable resources of surgery—a new creation. Nothing will contribute more largely thereto than Dr. Weir's masterly paper, which should find its way into the hands of every one.

At the last meeting of the Ophthalmological Society nothing of general interest was developed.

There was a universal, and by some, very severe, condemnation of the nasal douche, which was shown beyond doubt to be dangerous, even in skillful hands, not only to audition, but to life. Inquiry, however, failed to develop any knowledge among the members of an efficient substitute for the douche for cleansing the pharyngeal and nasal spaces. Dr. Pomeroy uses solutions of nitrate of silver applied with a brush, trusting to arouse a sneezing process to remove accumulations. Dr. Roosa and others use Davidson's syringe; some use simply snuffing up of water, medicated or not; but all these processes were shown to possess in no inconsiderable degree the dangers of the douche. The upshot of all is, that all the members use the douche or its equivalent, and trust to luck in not killing their man.

Other interesting matter must be deferred to my next.

Your North Carolina readers will be pleased to hear of the general success and high professional standing of some of their old friends, particularly Drs. Hall, Goelet and Skinner, of this city, and Dr. Fessenden, of Brooklyn. Others, are perhaps, not doing so well. Why? time will develop; but *non possumus omnes*.

D.

Chemistry of Common Life.—A distinguished Professor of Chemistry suggests that the nomenclature of that science might be drawn upon for a variety of pretty additions to female names. Having himself a family of five girls, he has named them respectively, *Glycerine*, *Pepsine*, *Ethyl*, *Methyl* and *Morphia*.

PUNCH.

Cost of Antiseptic Dressing.—Dr. Gillespie remarked before the Edinburgh Medico-Chirurgical Society, that he was glad to see an effort was being made to cheapen antiseptic dressings, as it cost about £1,000 a year in the Royal Infirmary.

Price of a Cadaver.—The market price of a dead body is about \$20 in London.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

We revive the NORTH CAROLINA MEDICAL JOURNAL without an apology for adding to the number of professional periodicals, although in the opinion of some persons, the number is already too large. Whether or not the profession are willing to agree with us that such a journal is needed, as we progress with our work we are satisfied that they will, and that they will welcome the visits of our JOURNAL with increased interest as they know us better.

The support already given and promised by our friends in North Carolina and elsewhere, cannot fail to realize our expectations of success, and to them, we return our thanks. At the same time we invite the aid of our friends with whom we have not conferred, in our new work. When our medical friends take up a number of our JOURNAL and are dissatisfied with its contents, let them betake themselves to their pens and contribute to our pages, and like true and skillful physicians apply the remedy they think is needed.

A new generation of medical men has sprung up since the last number of the MEDICAL JOURNAL of North Carolina was issued in 1862. The war with all its disastrous effects, was a school of training from which very many of the younger members of the medical profession came out, with enlarged views, increased knowledge and infinitely better education, both as physicians and surgeons; this is known to be true of the entire Southern profession. It is impossible to maintain this advanced position though without sustained effort, and nothing can be of more service to this end than periodical professional literature. We therefore, offer the NORTH CAROLINA MEDICAL JOURNAL to the medical profession as an earnest of our faith in the ability of Southern doctors.

THE WOMAN'S HOSPITAL CONTROVERSY.

We are sorry that Dr. Sims and the editor of the *Clinical Record* thought it due to the public, to present such an extended account of

this controversy. It is hard to see what good can come of it, and there is abundant opportunity for much harm. The friends of the gentlemen parties to the controversy, have long ago made up their minds about the case, and we do not believe that any American physician can cease to regret the altered relations they bear to each other now.

The professional reputation of all the gentlemen involved in this unfortunate controversy, is too much revered by the mass of American physicians for it to be affected by any number of controversial pamphlets; and we hope we will be allowed now to forget all but the brilliant scientific record they have given to this generation.

WEIGHT AND PULLEY EXTENSION.

In narrating the history of the progress of the treatment of fracture of the femur, (*New York Medical Record*, December 1st,) Dr. Frank H. Hamilton in his lecture on that subject has left out one or two items which are necessary to complete the history of this important matter. Professor Hamilton properly speaks of the weight-and-pulley extension, now so commonly associated with the name of Dr. Buck, as an apparatus which has so long been employed in this country, and so much modified that it may, with propriety be called American.

By reference to the *American Journal of Medical Sciences*,* it will be seen that Dr. William C. Daniell, of Savannah, Georgia, treated a case of fracture of the femur in 1819, by means of a weight-and-pulley extension, and so well was he satisfied with his results, that he again employed the same treatment in another fracture of the femur in 1824, giving a diagram of the apparatus employed. Adhesive plaster was not used, but the mechanical principle involved, was, in many respects the same. As far as we can discover, this was the beginning of extension by weights. It was not until the year 1851, that Dr. Josiah Crosby, described his method, in an article "on the application of extension in fractures by means of adhesive plaster,"† a method as far in advance of Dr.

*Vol. 4. p. 330. †N. Y. Med. Jour., Vol. 16. p. 138, from N. H. Jour. Med.

Daniell, as that of Dr. Buck or Dr. Sayre is in advance of that of Dr. Crosby.

Reference to Dr. Daniell's diagram, before mentioned, will soon settle the question of priority of invention and it is due to his memory, to recall the matter to the attention of those who have overlooked it. The elegance and usefulness of the present apparatus, so greatly improved since its inventor gave it to the world, does great credit to all the gentlemen who have lent their aid in perfecting it.

In the Southern States, the home of the invention, the weight-and-pulley extension is much less used than the suspensory anterior splint devised by Professor Nathan R. Smith. The latter apparatus is capable of so many modifications, is so easily prepared from material within easy reach of physicians, even in remote districts, and yielded such excellent results during the late war and since, that it is still the favorite.

Dr. Henry A. Martin calls attention to the fact, that more than one generation of practitioners in Pennsylvania, employed plaster straps for extension in fractures of the leg and thigh, and that Dr. Benjamin Gooch, of England, also employed it. It is true, notwithstanding this, that Dr. Daniell, of Savannah, did not hide his light, but put it before the world in the foremost medical journal of the land, and illustrated his appliance with a plate.

EDENBOROUGH MEDICAL COLLEGE.

Few physicians are aware that a Medical College has been in operation in North Carolina since 1868, in the backwoods of Robeson County, the nearest town, Lumberton, being about twenty miles distant. From this institution, presided over by Dr. Hector McLean, he being the only instructor in all the branches of medicine, very many "graduates" have been turned loose, chiefly upon the communities on the borders of the Carolinas.

A report from a committee appointed by the North Carolina Medical Society, made at its last meeting, shows that the charter of this concern was granted by the "Legislature of North Carolina,

and while its charter was full and liberal, and upon its face anticipated a first-class institution," its provisions were never carried out.

The "diplomas" were signed by Dr. McLean in all the different branches of medical sciences. The demonstrator of anatomy was the son of Dr. McLean, "quite a youth, who, himself has never seen the inside of any other college, and as far as we are able to learn has never dissected a human subject."

The committee "are unequivocally of the opinion that this state of things is a blight upon our profession, a burlesque upon science, and a curse to humanity," and recommend that the State Medical Society request the Legislature to rescind its charter.

The recent death of the principal, Dr. McLean, we hope, has put an end to this legalized outrage, but we trust that the committee will not be satisfied until they have made sure that this charter is rescinded.

We suppose, one reason why this matter did not receive earlier attention was, that it was hoped the granting of a charter was about all that would come of the enterprise, and that it would soon come to nothing, as did many others of the wild schemes then incorporated. But while the profession has allowed the wrong to go by unchallenged, chiefly because of their powerlessness to avert it, much harm has quietly been done, and we may be thankful that the end is close at hand.

It is very clear that the diplomas held by these graduates of the "Edenborough Medical College" are shams, and it speaks little for the intelligence of a community, that would countenance such pretenders. The remedy is within the reach of all who want it, viz: to demand that any such "doctor" shall show the license from the State Board of Medical Examiners, failing in this, he is debarred from collecting his fees.

Having carelessly authorized a scheme the outgrowth of which has worked so much evil for the unsuspecting people,—the constituents of the law makers, let them set about with earnestness and diligence to correct this error when the Legislature meets again.

RELATIVE VALUE OF QUININE, CINCHONIDIA AND OTHER CINCHONA ALKALOIDS.

In some sections of North Carolina, during the past summer and fall, malarial fever has been of a serious grade, and the high price of quinine has put this drug out of the question with the great majority of patients. The other cinchona alkaloids have been used extensively, and perhaps it is by the test of this past season's experience that their relative value will be determined. If it turns out that cinchonidia or cincho-quinine has answered as a substitute for the more expensive alkaloid, then its high price has served a valuable purpose in compelling their use. In hardly any other circumstances would physicians have abandoned their reliance in their long-trusted quinine for any other.

We do not wish to anticipate the result of the enquiries sent out by the State Board of Health, but we fully expect a report favorable, to at least one of the substitutes.

Of cinchonidia especially we have had abundant personal experience, during the past summer and fall, and have learned to trust in its remedial power in the severe pernicious fevers of our climate with a confidence, little short of that we place in quinine almost grain for grain; and when the price of the two drugs is considered, in the present impoverished condition of many communities, we have hardly any choice left.

REVIEWS.

INDEX OF DISEASES AND THEIR TREATMENT; By THOMAS HAWKES TANNER, M. D., F. L. S., second edition revised by W. H. Broadbent, M. D. Lindsay & Blakiston, 25 S. 6th street, Philadelphia. Price \$3 00.

From the first clinical hand-book published by Dr. Tanner, in 1860, to this work, he has succeeded in winning the popular favor of the profession. It is always a strong temptation for the busy practitioner who is seeking to refresh his memory upon the perplexing topic of his day's work, to go to a source wherever he can get the

desired hints with the least trouble. Whether or not such a superficial way is productive of favorable results, it is the way very many physicians have of informing themselves, and to them we know of no work so well up to the times as the one before us. There is a complete tabular synopsis in the beginning of the book, and the diseases are comprehensively arranged in alphabetical order.

There is a very full appendix of classified formulæ, covering upwards of 150 pages, also arranged alphabetically.

A short extract taken at random, will give an idea of the conciseness of the definitions: "SCARLET FEVER.—This disease known also as scarlatina, from the Italian *scarlatto*, scarlet—is an infectious fever, characterized by scarlet efflorescence of skin, and mucous membrane of fauces and tonsils; the efflorescence commencing about second day of fever, and declining about the fifth. Often accompanied by inflammation of throat and sometimes of submaxillary glands. Like measles, essentially a disease of childhood; but more to be dreaded. As a rule, scarlet fever occurs but once; in the event of a second attack there is often no rash, little or no throat affection, and the disorder runs a favorable course."

The Index covers the ground of surgical, as well as medical practice, and may be said to be a most valuable assistant to the student just starting out upon a special investigation, and in the author's word, it may truly be said that it is "a work which the practitioner will esteem the more highly, the more attentively he studies its pages."

FIRST AND SECOND CONTRIBUTION TO THE LIFE HISTORY OF CONTAGIUM; By Peter Murray Braidwood, M. D., F. R. M. S., and Francis Vacher, London, 1876-'77, 4 to pp. 21-26.—British Medical Journal.

The works before us on contagium are of especial interest. The medical mind is industriously seeking to trace the history of "disease germs," and to isolate, if possible, the morbid elements whatever they are, in one or more of the fluids obtained from vesicles of the well-known diseases, small-pox and cow-pox. In a *mémoire* presented l'Académie des Sciences, in 1868, (*Comptes Rendus*, p. 289,) M. Chauveau stated that the fundamental fact contained in this investigation of the nature of vaccine virus, was to make a basis for a general theory of contagion." Since that time

Drs. Sanderson, Beale and others have made observations upon the living elements of disease, while in Germany the late work of Dr. Klein on the Typhoid-Fever poison is already well known.

The three questions representing the problems of systematic study as presented in their work, are :

1st. What is contagium ?

2d. In what manner is contagium generated or communicated ?

3d. What are the conditions on which the life or activity of the contagium depends ?

The work which our authors accomplished is no easy one and may be briefly stated :

1. A repetition of the experiments of Chauveau and Sanderson to test the soundness of its evidence, on which was based the proposition that it is the particles and not the soluble constituents of vaccine virus upon which its activity depend.

2. Experimental vaccination of a heifer from which small sections of vaccinated skin were removed at successive periods of twenty-four hours, showing the graphic history of the local changes.

3. An experimental vaccination of many infants and heifers with lymph, mixed with or exposed to the action of certain so-called germicides.

4. An experimental vaccination of many children with lymph preserved for various lengths of time by various methods.

5. Many experimental vaccinations of human subjects with animal lymph, and of heifers with retro-vaccine.

6. Experiments with vaccine lymph and water exposed.

7. Experiments with vaccine lymph subject to increased temperature.

8. Experiments with vaccine lymph exposed to intense cold.

9. More experiments with vaccine mixed with so-called germicides.

10. Skin-sections removed from vaccinated heifers in various stages of progress.

11. A series of skin-sections from five vaccinated human subjects.

12. Skin-sections showing the progress of variola in the human subject.

13. Skin sections from healthy and scarlatinal pigs, and from human scarlatinal subjects.

The work is illustrated with many cuts, designed to give some idea of the microscopical appearances of the skin sections, pre-

sented by the authors to the British Medical Association. The expense of producing these illustrations in some higher style of art, would have been greater than that of the cuts furnished, but would have been more serviceable to the student. This is no fault of the authors, but was due to the economy practised by the Association publishing them. Drs. Braidwood and Vacher, have succeeded in presenting their work in an attractive way as could be, giving theory but a subordinate place, and making prominent the facts which their observations elicited. We shall look with increased interest for the third and last contribution by them. How far the isolation of disease-bearing germs, (which now seems all but established,) may go to lead us on to the practical lessons of the prevention of disease, we are yet to learn; but that one observer (Klein) believes that the contagium of enteric fever is cognizable to the eye, and another (Lebert) believes that an organism is found in relapsing-fever bearing a causative relation to disease, is well known, and it would be exceedingly disappointing if the outcome of all the work leading up to these convictions should not have a practical value at no distant day.

POISONOUS MUSHROOMS; By ISAAC OTT, M. D., Demonstrator of Physiology, University of Pennsylvania.

The comparative variety of mushroom poisoning in this country, makes it none the less desirable that the antidotes should be well known, and Dr. Ott has done a good service in issuing his pamphlet. It is the most complete statement of the symptoms and their treatment we have ever seen from any medical authority. He concludes, by saying: "That in mushroom poisoning, with the usual employment of emetics, stomach pump, purgatives and gallic acid, atropia should be given subcutaneously, say 1-100 of a grain, the dose to be repeated according to indications."

To one skilled in mycophagy, however, the earlier symptoms of burning in the throat are often well-marked and well-understood, and are promptly antidoted by whiskey and sweet-oil.

We cannot agree with Dr. Ott "that none (of the mushrooms) are very nutritious, and all are hard to digest."

The late Rev. Dr. Curtis, the most experienced American mycophagist, in an article on Edible Fungi, (*Gardner's Chronicle*,

London, October 9th, 1869,) says that "there are families in America, that for generations have freely and annually eaten mushrooms, preserving a habit brought from Europe by their ancestors. In no case, have I heard of accident among them. I have known of no instance of mushroom-poisoning in this country, except where the victims rashly ventured upon the experiment without knowing one species from another." And again he says, "of (their value as food) I had become so well convinced that, during the late war, I sometimes averred, and I doubt if there was much, if any, exaggeration in the assertion, that in some parts of the country I could maintain a regiment of soldiers five months in the year upon mushrooms alone."

* * * * * "Hill, plain and valley, woods, fields and pastures swarm with a profusion of good nutritious fungi, which are allowed to decay where they spring up, because people do not know how, or are afraid to use them. By those of us who know their use, their value was appreciated as never before during our late war, when other food, especially meat, was scarce and dear. Then such persons as I have heard express a preference for mushrooms over meat had generally no need to lack grateful food, as it was easily had for the gathering, and within easy distance of their homes, if living in the country." At one meal the Doctor had thirteen different kinds cooked together in a grand *pot-pourri*, owing to the scarcity of his favorite kind.

Dr. Ott's pamphlet contains some suggestions about the antagonistic effects of *muscarin* (the poisonous principle of the mushroom) and atropine. The former acts in some respects like calabar bean. It may be, that we will find in muscarin, by this new study of the subject, a valuable therapeutic agent.

The suspension of the *British and Foreign Medico-chirurgical Review and Quarterly Journal* is announced in the October number. The publishers have for sometime noticed a falling off in the sales, and this has continued in spite of their efforts to maintain the proverbial high standard, and to infuse new life into the publication. The reason given for its discontinuance is, that the same impatient spirit which looks for rapidly recurring issues from the secular press has spread itself among medical readers, and the

acknowledgment is sadly made, that the thoughtful old quarterlies must yield to the more spirited monthlies and weeklies. It dies gracefully, after an honorable existence of thirty-eight years, during which time it has maintained a leading position in directing medical opinion and progress. The very last number is fresh and quite up to to the highest grade of modern thought, embodying as much vigor as if it were an aspirant for a long life. From its ashes must come a Phoenix.

MEDICAL ANNOTATIONS.

CHRYSOPHANIC ACID OINTMENT IN PSORIASIS.

The accounts we get from London of the valuable results of the new chrysophanic acid in obstinate psoriasis are so remarkable, as to assure us that it will take its place permanently in our Pharmacopœia. About a year ago it was first brought to the attention of the profession by Dr. Balmano Squire, of London, and since that time it has steadily grown in favor.

One case of long standing psoriasis—twenty-seven years—was treated by Dr. Squire in the following manner: An ointment was made, two drachms of chrysophanic acid to an ounce of lard, the former being fully digested in the latter at a temperature of 360° Fahr. (oil bath) to insure the requisite incorporation of the ingredients.

The treatment was begun on September 24th, and by October 1st the greater part of the eruption had disappeared. Certain portions of the diseased surface were obstinate as is always the case; but on the 26th of October, the patient was in a condition of complete freedom from his disease.

As a necessary part of the treatment, it remains to be said, that phosphorous was administered in a solution with oil, in capsules, known as *perles*, the dose being 1-10th grain of phosphorous a day. Dr. Squire does not mention it, but it is well known to some American dermatologists that the phosphorous up to a certain point does well, and should be watched with extreme care, that this favorable limit be not overstepped.

Preparatory to using the chrysophanic acid ointment, the patient is taught to soften the scales with soap and water, and to scrape the skin with a dull edged knife. Care must be taken that the oint-

ment should not get into the eyes, and the patient is directed to wear a night-cap, and wash the fingers with benzol after using it. The hair, skin, nails and other parts are dyed so that it is only necessary to forewarn the patient. But any one who has suffered years or even months with proriasis, would willingly sacrifice clothing, and suffer the temporary staining of the hair, even to rival the dilemma of Tittlebat Titmouse, to have a cure effected. Dr. Squibb, in the *Proceedings of King's County Medical Society*, for December, reminded us that chrysophanic acid was found in rhubarb in considerable quantity, and that rhubarb ointment might make an economical substitute; but if the proportion mentioned by Dr. Squire is essential, the substitute would hardly be a saving. Some erythematous inflammation was produced by the ointment in Dr. Squire's case he tells us, and probably a weaker application would be better tolerated.—*Medical Times and Gazette*, Dec. 8th, 1877.

FUCUS VESICULOSUS.

Kelp; Bladderwrack. Seacoast of North Carolina, (Curtis' Catalogue Indig. Plants of North Carolina). The dietetics and therapeutics relating to obesity have gained considerable prominence in medical literature of late; and as the attention of persons suffering from obesity will be attracted by any remedy claiming a curative effect, it is well to mention *Fucus vesiculosus*, (Varec; Kelp; Bladderwrack) an old remedy brought anew to the attention of the profession.

In the 2d vol. of Pereira's Mat. Med. will be found a good wood-cut illustration of this plant; and also in the November number of *New Remedies*, are given illustrations of three species of *Fucus* to enable one to determine the true medicinal plant.

The constituents of this plant are *cellulose*, *mucilage*, *mannite*, *odorous oil*, coloring and bitter extractive, and various salts.

The amount of *iodides* is small, varying in the different localities where it is found, not more than 25 per cent. at any time; while the chloride of sodium, sulphuric acid, potash, soda and lime represent its solid constituents.

In 1862, Duchesne Dubois gave this drug for *Psoriasis* to an obese patient, and failing in the cure of the disease to which it was directed, he found that his patient lost flesh at the rate of 3½ lb. in 34 days, the dose being 4½ grains of the extract.*

The peculiar charm in the bladder-wrack as a remedy, is that no severity of diet is necessary. It is not until the remedy has been used two or three weeks that the peculiar effects show themselves, the favorable symptoms being the appearance of a black pellicle on the surface of the voided urine.

We will soon know whether this old remedy was worth drawing out from its old hiding place.

*An excellent fluid extract was shown us by Messrs. Green & Flanner, Druggists Market street, Wilmington, N. C.

INTRA-UTERINE INJECTIONS OF ERGOT.

Post-partum hemorrhage is quite common in Dr. Ashe's practice, (Wadesborough, N. C.) and is owing, he thinks to a general cachexia or habit of defibrinated blood, due to the wide-spread malarial influence, and also to excessive snuff-dipping among females.

His plan is to remove coagula; then with a Davidson's syringe wash out all the blood with cold water, and quickly inject into the cavity of the womb $\bar{\text{z}}$ ss. Squibb's fluid extract of ergot, with water $\bar{\text{z}}$ jv. The effect has invariably been to bring on promptly strong, permanent tonic contraction of the muscular fibre.

Dr. Ashe knows that the contractions are caused by the ergot, and not the removing of the coagula and use of cold water, because these means alone have not accomplished the same results.—*Virginia Medical Monthly*, December, 1877.

GELSEMIA AS A MYDRIATIC.

Recent observations have placed the *Gelsemium Sempervirens* and its alkaloid *Gelsemia*, in a prominent place in the list of new remedies.

It has long been known in the Southern States as a remedy, and the general introduction of it is due to the thorough test which has been made of it by Dr. E. A. Anderson, of Wilmington.

We learn from an article in the London *Lancet*, by Mr. John Tweedy, that a solution of four grains of the hydrochlorate of gelsemia to the ounce of water was employed as a mydriatic with the following effects: Gelsemia dilates the pupil within three hours if a solution of eight grains to the ounce is used, the power of accommodation returning after ten or fifteen hours; with atropia, the effects continue during several days, at least eight or twelve. The confusion of vision is nothing like as great after the use of gelsemia as it is from atropia. It is greatly to be preferred to atropine in those cases where the power of accommodation is not great, where it is necessary to overcome accommodation for a short time only for the purpose of estimating the degree of ametropia, because its effects are more transient.

OBSTETRIC PHANTOMS.

Dr. Fancourt Barnes exhibited to the Obstetrical Society, of London, a phantom made by Mathieu *fils*, which had lately come over from Paris. It was devised by Drs. Budin and Pinard, chiefly with

a view of familiarizing students with the diagnosis of the foetal position by palpation through the abdominal walls. For this purpose a caoutchouc bag was provided, to represent the bag of membranes. In this a dead foetus was placed, water was poured in to the necessary amount, and the bag was tied up. The whole was then placed in the phantom, an apron of caoutchouc representing the anterior wall of the uterus was buttoned over it, and the part representing the abdominal walls was placed *in situ*. By this means a very fair imitation of the natural phenomena was provided. Another modification of this new form of phantom, was that the promontory of the sacrum could be moved forward by means of a screw, so as to represent different degrees of the pelvic contraction. Cephalotripsy, craniotomy, and embryotomy might then be performed with a much nearer approach to actual conditions than in common phantoms. Finally, one great advantage in having all the soft parts made of caoutchouc, was that they could be easily replaced when worn out.—*London Examiner*, November 15th.

HYDROCHLORIC ACID AND NOT PEPSINE DIMINISHED IN FEVER.

An interesting illustration has just been noticed of an experimental investigation reported by Dr. Von der Velden (*Berl. Klin. Woch.* 1877, No. 22). The patient under investigation had typhoid fever, which ran a normal course. The contents of the stomach were examined daily, and revealed the absence of *free hydrochloric acid*, although the fluid gave a feeble acid reaction probably from the presence of lactic or acetic acid.

The case confirms the observations of Pavy, Hoppe-Soyler and others, that it is the acid, and not the pepsine of the gastric juice which is diminished in fever. It seems to confirm clearly the value which hydrochloric acid has long held in the treatment of typhoid fever, a practice which was recommended with great confidence by Chambers and Huss.

THE CHOICE OF THE LEG WHICH SHOULD BE SEIZED IN VERSION FOR PRESENTATION OF THE UPPER EXTREMITIES.

Dr. Galabin in this paper said that the case referred to is that in which the liquor amnii had escaped, and bipolar version is no longer possible. The doctrine commonly taught in England is, that in such cases it is necessary or desirable to seize the upper knee or that opposite the presenting shoulder. This is recommended on the ground that in this way the child is rotated on its longitudinal

as well as on its transverse axis, and by that means the presenting shoulder more effectually carried away from the os uteri. By taking the lower leg the foetus is rotated on its bilateral plane. By taking the upper leg it is intended to rotate it in the antero-posterior plane, which passes through the presenting shoulder and the opposite hip—a movement which is equivalent to rotation on its transverse and longitudinal axis at the same moment. In dorso-posterior positions, however, this rotation often fails, as is proved by the back being found still directed backwards immediately after version. In such case the same kind of rotation is produced by taking the lower leg, but at a less mechanical advantage. By two figures drawn to the same scale, representing sections of the foetus, first in the bilateral plane, secondly in the antero-posterior plane through the presenting shoulder and opposite hip, it is shown that traction on the lower leg acts at a greater mechanical advantage in effecting rotation on an antero-posterior axis than traction on the upper leg in effecting the combined rotation on a transverse and longitudinal axis. A more important advantage in seizing the lower leg is, that if a noose be placed on the prolapsed arm the operator will have in the after-extraction complete command of the anterior arm, which is always the one which gives trouble in liberation, and often thereby causes the death of the foetus. Moreover, if the lower leg be seized, the more usual dorso-anterior position is not converted by the version into a dorso-posterior—a point of very minor importance, but one which sometimes be worthy of consideration. The author has practised this method in eight consecutive cases without being obliged in any one of them to bring down afterwards the opposite leg. In some cases, however, if the foetus be dead and flaccid, the shoulder fails to rise if version be performed in this way. In these instances the upper leg may be brought down afterwards with as much advantage as if it had been seized in the first instance. In such difficult cases of version there is an actual benefit in bringing down both legs, for not only is a means thereby afforded for more powerful traction, but more room is furnished within the uterus. Moreover, if the breech be first drawn down as low as to a transverse position by traction upon the lower leg, traction upon the upper leg will afterwards act at greater mechanical advantage in rotating the foetus on its longitudinal axis, and so aiding the elevation of the shoulder. The conclusion drawn by the author is that in the majority of cases it is preferable to seize in the first instance the nearer and lower knee, or that on the same side as the presenting shoulder.

Dr. Matthews Duncan said he had for many years taught the preference of the leg homonymous with the presenting arm, according to the views which Dr. Galabin had now so elaborately and successfully advocated.

Dr. Holman said he had for many years followed the practice of bringing down the nearer or more dependent knee, and had always succeeded in effecting version.—*Extract from Obstetrical Society of London.*

1	gramme of	distilled water gives.....	20	drops.
“	“	laudanum “	38	“
“	“	black drops “	40	“
“	“	chloroform “	54	“
“	“	tincture of aconite, belladonna, or colchi- cum gives.....	58	“
“	“	ethereal tinct. of digitalis, gives.....	96	“
“	“	sulphuric ether, gives.....	98	“

As the result of a long series of experiments on cold and warm-blooded animals, Dr. Ludwig Witkowski comes to the following conclusions with regard to the action of morphia:—1. In a degree proportionate to the dose, which varies in different animals, morphia causes paralysis of the cerebral centres for sensation and voluntary motion. 2. The paralysis of these centres is not preceded by irritation or increase of excitability, but the various symptoms which have been thus explained are due to disturbances in the

equilibrium of the separate functions of the brain. 3. The respiratory centre is the last to become paralysed, and paralysis of this centre is the only or main cause of death. 4. The centres for the inhibitory fibres of the pneumogastric, for the vaso-motor nerves, and those regulating the contraction of the pupil are not directly influenced by morphia as regards either irritation or paralysis. 5. Morphia increases the reflex excitability of the spinal cord. 6. Morphia does not affect the peripheral nerves, whether motor or sensory, or the organs in which they terminate.

THE CINCHONA PLANT IN CENTRAL AFRICA.

We notice with pleasure that an attempt is about to be made to cultivate cinchona, tea and coffee in Central Africa. The experiment will be tried at Livingstonia Mission on Lake Nyanza, and the young plants will be supplied by the Madras Government. There seems little doubt that before many years are over Central Africa will be opened to the world. It is much to be desired that extended fields for the cultivation of cinchona may be found, and that greater abundance of the plant may reduce the present high price of quinine.—*Medical Examiner*.

COLLECTANEA AND ANSWERS TO CORRESPONDENTS.

AUTOGRAPH LETTER OF EDWARD JENNER.

J. R.—Many thanks for the autograph letter of Dr. Jenner, We cannot fix the date, but suppose it to be about 1815, as the letter is addressed to his son, Robert Jenner, then a student at Oxford.

Upon this supposition, Jenner must have been at the time, 69 years of age; but his age would hardly be inferred from the writing, which is clear and flowing, and the vein of humor more like that of a young collegian, than of an elderly gentleman.

The enclosed portrait and silhouette are quite good, but do not equal the mezzotint from the portrait by Northcote, nor are they as good as the portrait of him in Gillray's famous anti-vaccination caricature, or "in Bolt-court." This is a matter of opinion, however, and does not at all diminish the pleasure we have in owning an autograph of the man who did more than any other person in the world's history, to save life and disarm a loathsome disease of its horrors.

CHLORODYNE SUBSTITUTE.

Dr. Gilman, in *Boston Medical and Surgical Journal*, gives the following as a formula of a new *Elixir Chloroformi compositum*, a substitute for the secret nostrum known as chlorodyne :

℞
 Chloroformi, 3 ij.
 Glycerniæ, 3 ij.
 Spts. vini rectificati, 5 ij.
 Spts. Menthæ piperitæ, 3 ij.
 Acidi Hydrocyanici dil., 3 ij.
 Tinct. Capsici, 3 ij.
 Morphiæ Muriatis, gr. viij.
 Syrupi (treacle), 3 iij.

Dose for an adult, one teaspoonful ; for a child one year old, three to five drops, diluted with water, repeated at proper intervals if necessary.

TALKING PHONOGRAPH.

The world has hardly regained its composure since the telephone was announced by Mr. Bell. The *Scientific American* for December 22d, has an illustrated article by Mr. Thomas A. Edison on the "Talking Phonograph." It records by indentations on a cylinder the sounds uttered by the telephone, storing them up to be reproduced when desired, by a mechanical arrangement. What this new phase of creative genius has in store for us we dare not imagine, but it has been rendered possible now that the very tone of voice as well as the identical language may be transmitted through a period of time indefinitely remote.

ONE OF THE POULTICES.

We present a specimen receipt two hundred years old, which will hold its own with some of the sure-cure diphtheria applications so often met with in the newspapers of the day :

Take "A swallow's nest ; Album Græcum 2½ ounces ; Althea, White lily roots, of each one ounce ; figs and dates, of each number three ; Boil them in water to a poultice, and add—oil of violets, camomile flowers ; fœnugreek, linseed, white meal, of each 6 drachms ; the brain of a cat ; the powder of a burnt owl and of a burnt swallow, of each two drachms ; yolks of 2 eggs ; saffron one scruple. Make a cataplasm." "It is good in a desperate quinsey, applied often hot to the neck."—*Medical Times and Gazette*.

SUPPRESSION OF OPIUM SMOKING IN CHINA.

The Emperor of China has issued another edict against opium smoking, especially by officials, scholars, and in the army it is to be forbidden throughout the country; the prohibition to come into effect in three years time. Generals, Governor-Generals, and the Governors of the various provinces, will, meanwhile consider and draw up local regulations for giving effect to the order. It is said that the Chinese in London have persuaded the Imperial Government to take this step.—*New Remedies*, December, 1877.

The *Frypan Americanus*, figured in a December number of *Harper's Bazar*, will be recognized by most of our readers as the monster which carries bad health to the door of the humblest cottage and many of the homes of luxury. Boards of Health would do more good by sending the illustration of the dread creature to the people, than by multiplying "Blue-books."

I used to wonder why people should be so fond of their physician, 'till I recollected he is the only person with whom one dares talk continually of one's self without interruption.

HANNAH MOORE.

Dr. Wm. M. Mastin, of Mobile, would be pleased to correspond with an physicians who have performed "Tracheotomy for pseudo-membranous, or true croup and diphtheria," as he is collecting statistics of these operations.

Treatment of Ague in China.—It is always a matter of interest to compare our treatment of malarial diseases with that of other countries, and so far the practice in the Southern States of the Union is not excelled. But in China, Dr. Dudgeon, of Pekin says, "a combination of arsenic, spiders and beans is highly extolled when it is desired to cut short an attack in a spirit-like manner. It is somewhat remarkable that the Chinese for thousands of years have been following a tonic and arsenical treatment."

Harmless Coloring for Dietary Articles.—A harmless green coloring has long been a necessity with dealers and housekeepers, as certain articles of diet are esteemed in proportion to their color.

One can be made after the following manner : Dissolve chlorophyll in caustic soda, and then precipitate with alumina. Treat the precipitate with phosphate of soda, saturated by the acid phosphate of lime, and a pure green coloring is procured, which fixes itself permanently and is perfectly innocuous. As articles of diet were formerly colored with poisonous salts of copper, this fact is worth noting.

Committee on Hydrophobia.—The British Medical Association has appointed a committee consisting of Mr. Callender, Dr. Burdon-Sanderson, Dr. T. Lauder Brunton, and Mr. Ernest Hart, to organize an investigation into the causation, pathology and treatment of rabies and hydrophobia ; and the committee of the Council Association have granted the sum of £100 towards the expense of the inquiry.

An easy way to determine sweating of the skin in those skin-diseases in which it is desirable to know it, may be demonstrated as follows : Apply a piece of bibulous paper upon the skin for a sufficient length of time, and afterwards pass a stick of nitrate of silver over the moistened surface. The stains of the chloride reaction will indicate the presence or absence of sweat.

Diphtheria in San Francisco.—We learn from a circular “ Reports of Deaths,” in San Francisco, sent us by an esteemed North Carolinian, Dr. John L. Meares, Health Officer of San Francisco, that there were 45 deaths from diphtheria in a population estimated at 300,000. With the exception of phthisis pulmonalis, which for the same month is 49, the highest mortality is attributed to this disease. For the same period, out of 39 deaths among the Chinese population of that city, 33 were from unknown causes.

The Science of Temperance.—Dr. B. W. Richardson, (*Medical Times and Gazette*), says in course of remarks on other matters connected with temperance. 1st. The substance now called alcohol is not a food. 2d. That common alcohol is not a specific gift sent any more than other chemical bodies. 3d. As physiologists, &c., they saw no provision for any other liquid than water. (How about milk ?) 4th. That Ethylic alcohol does not act often in the manner of a food at all, but produces effects phenomenal in their character..

A fatal dose is a drachm to every pound weight of the animal taking it. To a man of 120 pounds, $15\frac{2}{3}$ would be a fatal dose unless medical aid was rendered.

A Sign of Hemoptysis.—M. Paul, of *Société Thérapeutique* says, that a sure sign of hemoptysis is found in the recurrent pulse. If while the finger compresses the artery at the wrist, a pulsation is felt in the hand, we may feel certain that the patient will spit blood. During the last ten years in which he has paid attention to this point, he has come to regard this sign as certain.

Carbolated Camphor in Diphtheria.—The employment of the above remedy as a special application was brought to the attention of the *Société de Thérapeutique* by Dr. Souley. Its utility is chiefly due to the power it has in arresting the spread of membrane, in those cases in which its propagation is very rapid. Under the contact of carbolated camphor the pseudo-membrane seems to lose its vitality, without irritating the surrounding parts, a difficulty attending the employment of many preparations now in use. The solution employed is made by dissolving powdered camphor in a solution of crystalized carbolic acid in alcohol (nine parts of the acid to one of alcohol). It may be employed pure, or diluted with sweet or almond oil.—*Gaz. Hebd.*, November 23.

BIOGRAPHICAL NOTICES OF EMINENT PHYSICIANS.

NORTH CAROLINA.—Dr. Charles Harriss, a native of North Carolina, served in the Revolutionary war before he had completed his medical education. He first practiced with success at Salisbury, but removed to Favonia, the name of his plantation in Cabarrus County, where he remained actively engaged in practice to the close of his life. Ninety-three physicians studied with him, his reputation being such as to make him a desirable preceptor. His professional life extended over forty years (b. 1763 ; d. Sept. 21, 1825.) Dr. James Norcom, a native of North Carolina, commenced practice at Edenton in 1799. He acquired a large but laborious busi-

ness, often visiting patients at a distance of 100 miles, on horseback. His practice was chiefly that of a physician, although performing such surgical operations as usually fall to the lot of rural practitioners. His obstetrical practice was large. In 1812, he was commissioned Assistant Surgeon in the U. S. Army, but resigned in January, 1813. He wrote a paper on the Winter Epidemic of 1816, and made a number of contributions to medical journals. (b. 1788 ; d. Nov. 9, 1850.) Dr. James H. Dickson, a native of North Carolina, having practiced for a couple of years in South Washington, removed to Fayetteville, where his practice became large. In 1835, he divided the tendo Achillis, for the relief of club-foot. About this time he ligated the external iliac artery. He was everywhere recognized as a skillful and successful surgeon. Dr. Benjamin Robinson, a native of Vermont, commenced practice in his native place, but removed to North Carolina in 1804, and settled at Fayetteville, where he spent the remainder of his life, laboriously engaged in his profession. While a student of medicine, he performed an operation for the relief of strangulated hernia, with success. He was distinguished through life for his untiring assiduity and common sense. His memory is still cherished by the descendants of the community in which he passed his useful life. (d. March 8, 1857, aged 82.) Dr. Charles E. Johnson, a native of North Carolina, settled in practice at Edenton, and thence removed to Raleigh in 1835. He was especially interested in nervous diseases and physiological studies. He wrote a paper on the Medico-Legal relations of Insanity. (b. March 15, 1812 ; d. April 1, 1876.) Dr. Armond John DeRosset was a native of North Carolina, and a graduate of Princeton College. His immediate ancestors, father, grand-father, and great grand-father, were physicians. The duration of his practice extended to 62 years. He was a good classical scholar, and a cultivator of the sciences, which he applied to the practical and every-day requirements of his profession. (d. April æt. 92.) I will also mention Drs. James J. Phillips, of Edgecombe county ; James Fergus McRee, of Wilmington ; R. H. Shield, of Winston ; Wm. H. McKee, of Raleigh ; Wm. Perry, of Franklin county ; Elisha Battle, of Edgecombe county ; Henry M. Shaw, of Currituck county ; Joel B. Houston, of Columbia ; Matthias E. Sayer, of Edenton ; Simon J. Baker, of Raleigh ; and Pinckney Caldwell.—*Toner's Address on Medical Biography.*

OBITUARY.

M. BARTH.

The announcement is made of the death, last month, of Professor Barth, whom our readers will remember as joint-author with Professor Roget, of the *Manual of Auscultation and Percussion*.

MARTIN PAINE, M. D. LL. D.

Dr. Martin Paine, LL. D., Professor Emeritus in the University of New York, has, after a long and honorable life, been called to his reward. He was a very voluminous writer; but expended his abilities in holding fast to that which he thought good, rather than in contributing to the advancement of modern medicine. His respect was more for learned tradition than for the simple spirit of observation, hence his ploughshare leaves no deep furrow in our field.

WILLIAM R. SHARPE, M. D.

The death of our esteemed and beloved friend, William R. Sharpe, M. D., which occurred at his late residence, in Fulton, Davie county, N. C., on the 21st of November, 1877, cast a gloom of darkness over the community in which he had so long lived and served, and the medical men who knew him, and with whom he had mingled at the Medical Society's meetings of this, his beloved State.

He entered his medical career in the spring of 1851, graduating at this time, at the Jefferson College of Medicine, in Philadelphia. Since this time he has been zealous and faithful, both to his people and the medical profession, at all times and under all circumstances, adhering with rigid strictness to the medical code.

Feeling much worn and desiring to rest, he spent his time during the winter of 1876, and spring of 1877 in New York, at the Bellevue Medical College, admitted to the *Ad Eundem* degree of that institution. He returned home refreshed, both in body and mind, and entering his professional duties with renewed activity.

For some few days before his death, he had been taking a dose of quinine before breakfast for a slight cold. On the morning of the 21st, he made the sad and fatal mistake, by taking about five grains of morphine, which took immediate effect on his cerebral organism, rendering him almost completely narcotised in a few minutes. Medical aid was called; but did not reach him until about 1 o'clock. At this time he was completely narcotised and no good could be done for him. Atropia and other remedies were administered with no effect.

He slept quietly and sweetly, expiring without a struggle at 8 o'clock, P. M.

He was born November 30th, 1822, and died November the 21st, 1877. Aged 54. J. W. F.

Fulton, N. C., December 20th, 1877.

COMPOSITION OF QUACK MEDICINES.

With regard to most of these preparations, there is no secret, as thousands of analyses by competent chemists have supplied revelations which would fill volumes. This is, however, of no avail, for neither the chemists nor governments are disposed to incur the expenses which would be required to make known the deceptions of these widely advertised compounds.

RICHTER states that among 938 secret remedies analyzed by him, he found, First : 22 per cent. contained substances of violent or poisonous action ; and second : 25 per cent. which, although less active, yet were possessed of medicinal power ; while third : 52 per cent. were of no importance, or quite inoffensive. The first category especially comprises violent and poisonous agents for the skin and hair ; opiates for children, capable of inducing cerebral disease and even death ; “purifiers of the blood,” composed of arsenic and mercury ; and a whole legion of violent purgatives capable of doing in inappropriate cases an immense amount of mischief. The third category comprises preparations which have nothing in common with the noxious and poisonous effects produced by those of the first and second, but yet agree with them in being sold at from five to a hundred times their proper value, and thus constituting robberies. All these attacks on the public health and morals, take place with the full cognizance of the public authorities.—*Lyon Médical*.

BOOKS AND PAMPHLETS RECEIVED.

Present aspect of the Sewage Question, &c. ; by Charles F. Folsom, M. D., pp. 18, Boston, 1877.

Extirpation of Functionally active Ovaries, &c. ; by Robert Battey, M. D., Rome, Georgia, pp. 20, 1877.

New Uterine Pessary ; Professor V. H. Taliaferro, M. D., Atlanta, Ga., 1877.

Poisonous Mushrooms ; Isaac Ott, M. D., Physiological Laboratory University of Pennsylvania.

Life-History of Contagium ; Braidwood and Vacher.

What Anæsthetic shall we use ? ; Professor J. J. Chisholm, M. D., Baltimore, 1877, pp. 23.

Michigan Board of Health Reports for 1876.

A case of Puerperal Septic Fever ; by Geo. J. Northop, M. D., of Marquette, Michigan, and some remarks on the Relations of the Medical Profession to the People ; by Henry B. Baker, M. D., of Lansing, Michigan, 1877.

Clinical Record Extra ; Editorial Interview of Dr. J. Marion Sims, in relation to Woman's Hospital Controversy.

Diseases of the General Organism in their Relation to Vision ; by Geo. H. Rueling, M. D., Surgeon in charge of the Maryland Eye and Ear Institution.

Stricture of the Urethra. When and how shall we perform Internal Urethrotomy ? ; by Claudius Mastin, M. D., LL. D., Mobile, Alabama.

The Causes and Geographical Distribution of Calculous Diseases ; by the same author.

Cronica Medico-Quirurgica de la Habana.

Revista de Cuba.

Un Mot à propos de la Résection du Genou, par le Docteur L. Servais, d'Anvers, 1877.

Boston Medical and Surgical Journal.

Atlantic Monthly, Louisville Medical News and Medical Record.

Virginia Medical Monthly, Medical Examiner, Medical Times and Gazette, and London Lancet.

Mental Hygiene ; Eugene Grissom, M. D. LL. D.

The Virus of Venereal Sores, its unity or duality ; by Freeman J. Bumstead, M. D., Late Professor Ven. Dis. Extracted from the International Medical Congress.

The Nature, Origin and Prevention of Puerperal Fever ; by W. T. Lusk, M. D., Professor Obs. and Dis. Children Bellevue Hospital Medical College, N. Y. Extracted from Trans. Inter. Med. Congress, Philadelphia.

Tobacco from the Seed to the Warehouse, a practical handbook for the Tobacco Planter ; by B. Rush Senseney, M. D., Chambersburg, Pa.

Tanner's Index of Diseases and their Treatment.

Fifteen Cent Dinners ; Miss Juliet Carson.

Suicide ; A paper read before the San Joaquin Medical Society ; by G. H. Shurtleff, M. D., Stockton, California, 1877.

South-Atlantic, for January ; Edited by Mrs. Cicero W. Harris, Wilmington.

Cases of Aphasia ; by Professor L. P. Yandell, Jr., M. D., reprinted from the Medical News, December. 1877.

St. Louis Medical Clinic.

Biennial Report of the Mountain Sanitarium for Pulmonary Diseases, Asheville, N. C. ; by Dr. W. Gleitsmann.

A few words on "Unfortunate Results of Vaccination" ; by Dr. Henry A. Martin, Boston, 1877.

A new Adhesive Plaster, especially adapted to the requirements of modern surgery ; same author, Boston, 1877.

Remarks on Treatment of Fistula in Ano by Caustics ; same author, Boston, 1877.

Propriety and necessity of Compulsory Vaccination ; by Dr. J. M. Toner, Washington, D. C.

Address on Medical Biography delivered before the International Medical Congress ; same author Philadelphia, 1876.

Clinical Contribution to Ophthalmology from the practice of Dr. C. R. Agnew, N. Y. Reprint from Archives of Ophthalmology, &c.

MEDICAL SOCIETY OF NORTH CAROLINA.

Although the meeting of our STATE MEDICAL SOCIETY occurs at what seems a distant day, viz : in May of this year, we wish to call the attention of members of the Society, to the necessity of announcing at an early day the title of the papers they intend presenting.

This is as necessary for clinical reports as for regular dissertations. If contributors want to save themselves the discomfort of having their papers passed by without discussion, let them send us for publication, the title of the subject upon which they have prepared their papers as early as March.

BOARD OF MEDICAL EXAMINERS.

We suggest to the Board of Medical Examiners that they meet in Goldsborough a day in advance of the meeting of the Medical Society. This will give them an opportunity of passing upon candidates who are then eligible for membership, and gain thereby an opportunity of enjoying the meeting themselves.

BEAUGENCY VACCINE VIRUS.

It may be an old story to some of our readers but it is a true one, that the time has come in the history of vaccination practice, when even a careful arm to arm vaccination is only warrantable when cow-pox directly from the cow cannot be obtained. The dangers from syphilis and erysipelas are real, and the physician who shuts his eyes to these facts, may be wakened from his skepticism on these points by disasters which will cost him dearly. In nearly all the communities in which Beaugency virus has been employed, patients demand its use. A large experience with this virus enables us to endorse it, and we know that at the Pennsylvania Vaccine Farm great care is taken to maintain an unbroken succession of genuineness.

Medicine of to-day owes very much of its efficiency, and doctors of to-day owe very much of their success to the great improvements in pharmaceutical products. One preparation which has been of service to us, representing the element of an invigorating tonic and nutriment, by saving us all the uncertainty which we encounter in leaving the preparation of concentrated diet to unskilled nurses is COLDEN'S LIEBIG'S TONIC. In that stubborn nausea, incident to chronic alcoholism, and loss of appetite in our debilitating summer season, it has been of so much service as to induce us to know more about it. It is not a secret preparation, as the proprietor will furnish the formula on application.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D., }
THOMAS F. WOOD, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

THE EARLY RECOGNITION OF LUNACY.

By M. J. DeRosset, M. D.

If any further progress is to be made in the therapeutics of insanity it must probably be in the application of remedies and measures of a preventive nature, made in the prodromic stages, before the mental phenomena have been evolved, for it is almost certain that the percentage of cures obtained in our Insane Asylums, under their present benign management is hardly susceptible of any material increase. The ratio of mortality may be diminished; individual suffering may be lessened; and the average duration of life among the unfortunate alienated be lengthened; but the number of asylum inmates to whom reason returns will, it is believed, never be relatively greater than now.

Has then the ultimate extent of our power in the prevention and cure of lunacy been attained? It were sad in its significance to society and marked in its commentary upon our science if we were forced to an affirmative in this inquiry, but fortunately the outlook is not so bad, and the object of this paper is to indicate in which direction a line of further progress lies.

It cannot be too strongly urged upon the profession, particularly

general practitioners, that with them, far more than with the asylum superintendents, is the greatest promise of material advance in the cure of insanity ; for every part of its history has been diligently explored, except that which exists before it comes under the observation of the expert. The family physician alone, from his constant and intimate relation with his patients, is in position to see the mental cloud while it is yet a mere speck upon the horizon, and to foretell in its curative stages a disease which, if it pass unheeded, sooner or later numbers its victim among the confirmed insane, and reduces his chances for recovery to those of the average asylum inmate, seldom greater than thirty per cent. No sympathy with family pride or any baser motive should be allowed to oppose itself to the practitioner's duty—humanity, morality, science, all demand a recognition of facts when their existence is declared by the methods which we shall later point out.

Let it then be well impressed, that in the history of nearly every case of lunacy, there is a prodromic period when reason is as yet uninjured, and which is possible of recognition, and in which a favorable prognosis under wise treatment, is fully warranted. There is no sudden leap from reason to dementia—*natura non facit saltus*—the passage from one to the other is through an infinite variety of gradations, each successive advance probably having its genetic factor in pathological changes, so that it has been fairly remarked, by one competent to speak, “*Entre la raison et la folie confirmée il existe une période raisonnante de toute nuance.*”*

A better knowledge of the etiology of lunacy is now prevalent even outside of the profession, and the old metaphysical conception of it is yielding to the proper view which sees in it a diseased state of the body, in which a disturbance of the psychical functions is the grand symptom. In no sense is it a special Divine visitation further than may be said of any malady, and the sooner practitioners recognize that every instance of mental aberration is due to encephalic or rachidian changes, the sooner will their eyes be opened to a possibility of curing their cases before permitting them to reach that stage when society and the patient's own safety demand his occlusion within the walls of the mad house, over whose doors might justly stand the old inscription,

“*Voi che entrate
Lasciate ogni speranza.*”

* Bigot, Des Périodes Raisonnantes.

The terrors of these institutions have, it is true, almost wholly passed away, under a wiser and more humane management, but the asylums even now are not free from conditions unfavorable to recovery, for at the best they entail an intermingling of discordant natures, and it is easy to see how the scale may be made to turn against a mind already trembling in the balance, by rude contacts of course and refined, by the stimulus of exciting emotions, or by the arousing of passions and thoughts that loose the mind from the reins of reason. These possibilities are, we admit, guarded against by great forethought, but the difficulty is inherent in the system, and cannot be eradicated while the asylums are, as now, pressed to their very doors with inmates. When provision is made to admit of a segregation based upon condition and educational and social rank, as well as upon sex, then the defect may be in a measure remedied, but for the greatest measure of relief we must provide against overcrowding the asylums by treating our patients in those stages while yet it is possible to prevent the confirmation of their malady.

That insanity is a condition arising from actual alterations in the cerebral mass or its connections is now too well established to require additional evidence. The negative results of the earlier autopsies were clearly due to the coarse methods by which they were made, and must pass for nothing when compared with the demonstrations of modern pathology. Thus Clouston* has shown that pathological changes of the most obvious kind may be found in or about every insane brain;—adherent and thickened membranes, congested and toughened folds of the pia mater—adherent to convolutions, blood coloring matter, and even thickened and condensed cranial bones, affecting by pressure or by continuity of pathological process the delicate cerebral substance.

Atkins† and Kesteven‡ are additional modern authorities in support of these views, but to cite all who are available would lead us too far from the object of our paper.

The extent and quality of histological change essential to produce a recognizable amount of mental aberration will probably never be determined, for the power of the brain to withstand very severe accidents, and its intolerance of apparently trivial injuries are so contradictory in the information afforded, that no definite esti-

**Jour. Ment. Sci.*, No. CII. p. 349, et seq.

†*Dub. Jour. Med. Sci.*, January. 1877, p. 42.

‡*St. Barthol. Hosp't. Reports* XII, 1876, p. 52.

mate can ever be assumed for a given case. Still it is known that faulty conditions in the circulation or quality of the blood often induce minute trophic changes in the delicate neurilemma and connective net-work, which, from their intimate association with neurine or nerve substance, cannot fail, even at the outset to give rise to abnormal expressions of intellectual, sensory or motor functions.

Which one or more of these departures from the normal, is most likely to be met with, will depend, as demonstrated by Hitzig, Ferrier, Seguin, Bartholow and others, upon the location of the pathological process. As yet, we are unable to accept Brown Séquard's theory of non-localization.

It is impossible in the light of our present knowledge to indicate all of the manifestations which a careful analysis would reveal in what we have called the prodromic stage of insanity. Nevertheless, many of them may be inferred, and doubtless will be found in varying degrees of exaltation or depression of intellect, of sensation, of motion and of nutrition.

Behind the histological changes which give rise to these abnormal symptoms, lie, of course, an infinite number of causes, some existing within the body, as when mania follows other diseases, some acting from without through the organs of perception, inducing a degree and kind of cerebation that tends to pathological results. Active cerebral hyperæmia, for instance, may arise from almost any circumstance or condition, internal or external; this may tend with continuing cause to perpetuate itself, leading to changes in local nutrition; or it may progress to a limited or general inflammation, with plastic effusions, hyperplasms, &c. It may be, and often is followed by œdema, with overfilled veins, and stenosis of arteries.

This, or some portion of the scheme, is probably the first pathological step in every case of mental aberration. In a measure, as the progress is rapid will the manifestations arrive, and as the process is general or confined to minute areas, so may we expect the symptom or group of symptoms to vary from that which, if taken singly, would give rise to no suspicion, to others which are unmistakably the evidence of approaching insanity.

We shall not undertake to point out all the subjective and mental symptoms, which, indeed, may elude the search of the acutest observer. There may be pain, strangely or persistently located,

irregular muscular action, actual or feigned paralysis, absurdity in ideas or expressions, vagaries in morality, religion, ethics, and æsthetics, melancholia, frivolity, &c., in a word, any departure from that which has always marked the nature and habits of the individual. Our object leads us not to speak particularly of these, but whether with them we may not find other concomitant symptoms that shall confirm the diagnosis, and lead to proper therapeutic and preventive measures.

To facilitate our purpose it may be well to recall briefly the semiological data which we are to look for, and the directions in which they are to be sought. Conspicuous and of prime importance are disorders of the circulation, excess or deficiency of heart tone—high arterial tension, venous sluggishness,—alterations in the quantity or quality of the excretions, abnormal temperature, impairments of nutrition, and the *intra-ocular phenomena*. A careful observer will note all of these, aiding his powers by the use of the various instruments of precision. It is hardly to be expected that the sphygmograph, notwithstanding the valuable information it gives, will come to be very widely employed, but no practitioner at this day does his whole duty who neglects to use the thermometer in the study of his cases, or who habitually disregards the value of examining the urinary excretion. These things are so obvious that it is useless to our purpose to dwell upon them; nor would we have it inferred that any of these methods taken singly, or without co-existing traces of the subjective phenomena recited above, are to be held as conclusive of approaching lunacy, whatever they disclose; but they are factors in the solution of a delicate question, and may become potent in enabling us to arrive by exclusion at a knowledge of a cerebral trouble, in its incipency. It is upon the *intra-ocular phenomena* that we would expend the remaining pages of this paper. And here we approach the confines of a controversy which has been long and ardent—as to whether the condition of the intra-ocular circulation furnishes an indication of that within the cranial cavity. Dr. Hughlings Jackson, although not an ophthalmologist, has made himself very expert in the use of the ophthalmoscope, and lays great value upon it as an aid to diagnosis in cerebral pathology.

The anatomical relations of the optic nerve and retina and brain, would, upon *a priori* grounds, lead to the inference of their common participation in circulatory disturbances, and it has been

found that pathogenetic processes going on within the brain do cause decided changes in the optic nerve, retina and choroid. The phenomena of "choked disc," or engorged papilla, was the field of controversy, Von Graefe, being the first to recognize the connection between it and affections of the brain. After Schwalbe's discovery of the direct communication between the subarachnoid space and the sheath of the optic nerve, which permits the passage of the cerebro-spinal fluid within the sheath, it was maintained by many that a "choked disc" was always due to that fact, the fluid being driven thither as alleged, by the existence within the cranium, of some coarse disease, as a tumor, infringing upon the arachnoidean cavities. Mainz* and most ophthalmologists hold to that view. But Bouchut† has lately shown by an analysis of 472 cases of tubercular meningitis (of which 463 were recognized by the ophthalmoscope) that *changes in the papilla were manifest before there was any evidence of internal disease*. These changes are represented by swelling of the disc, redness, and subsequently a hazy, grey veil which later extends to the retina. Not only ordinary meningitis, tubercular meningitis and other cerebral inflammations induce these appearances, but *insanity* likewise, besides often giving rise to unequally wide pupils, is frequently marked by inflammatory and atrophic changes in the disc|| doubtless a part of the process within the cranium.

Bouchut, therefore, does not hesitate to restore Graefe's theory to the position from which it had been displaced, going farther and declaring that not only do processes which determine filling and tension of the cavernous sinus lead to these changes in the papilla, but that a similar effect is produced from pressure upon any of the great sinus of the brain. Schwalbe's theory is defective, because, although infiltration of the optic sheath happens in meningitis, it also happens in many other maladies, as pneumonia, whooping cough, croup, phthisis, &c., in which papillary swelling is seldom observed.

There can be no doubt that even minute changes in the circulation of the brain, of a congestive, inflammatory or trophic nature induce corresponding changes in the eye, without the existence of coarse disease, and in spite of the efforts which have been made to

*Graefe and Saemisch Handb. der gesam. Augenhellk. Bd. VII, 1st Haelfte.

†Gaz. des Hôpt., Dec. 11, 1877.

||Graefe and Saemisch, &c.

show that the collateral anastomoses of the ocular vessels with the facial are sufficient to relieve the conditions which would arise from impediment to the flow of blood within the cranium. And this may also be said of troubles which have their origin in the spinal cavity, for tabes dorsalis is often foretold by optic nerve atrophy, which may precede all other symptoms by several years.

Whether "cerebroscopy" by means of the ophthalmoscope shall ever be established upon as firm and reliable a basis as has been Laennec's great methods of exploring the chest, is not exactly pertinent here, but enough has been already established to show that the ophthalmoscope which hitherto has been limited almost exclusively to the requirements of ophthalmology, ought to be in the hands of every physician, in daily use, to discover the earliest evidences of many diseases which are remediable only at their outset. It has, it is true, been to a certain extent employed in the study of insanity, but not in its prodromic stages; and here is a broad, new field which, of necessity, is open almost alone to the general practitioner, and not to the expert.

On this account, it is impossible now to describe with anything like preciseness the appearances within the eye, indicative of cerebral processes, which, if uninterrupted, would end in lunacy. But it is certain that they may in a large percentage of cases be found, and may consist in retinal injection, venous fulness and pulse, small exudations, engorged papilla, neuritis, and later, the deeper seated alterations in the choroid. It may here be remarked that it is common to meet with cases of neuritis existing for months without any impairment of vision.

When the ophthalmoscopic picture presents any of these features, and they are not, by careful study, to be connected with any other disease or condition, then we are to regard them as of sufficient semeiological import to warrant the apprehension of threatened lunacy.

Now is the moment for a judicious therapeusis, and whether it shall be with bromides, chloral, opiates, cannabis, or whether relief is to be sought through hygienic measures in diet, exercise, bath, or through the psychic influence of change of climate, association, studies, amusements, ideas, must be left to the individual circumstances of each case.

Unfortunately, ophthalmoscopy is a bug-bear to the average

practitioner, under the false impression that it presents obstacles which only long, patient practice can overcome. For the fine determination of errors in refraction, this is doubtless true, but the acquisition of the amount of expertness required in mere inspection of the ocular fundus is rapid and easy. For this purpose Liebreich's simple ophthalmoscope is the best, and any practitioner purchasing this from an instrument maker ought to receive gratis, if he asks for it, a short printed explanation of the method of its use. Only the reverse image is required in this study, and the pupil ought to be dilated with atropia, a solution of which, not stronger than one grain to the pint of water, will suffice. This, if applied twice, will secure an ample dilatation inside of an hour, without affecting the accommodation as the strong solutions do, and the effect passes off within twenty-four hours. A simple candle or lamp flame furnishes all the illumination required, and a "condenser" is unnecessary.

HISTORICAL REVIEW OF THE DISEASES OF CUMBERLAND COUNTY.

Paper read before Cumberland Medical Society at December meeting, 1877, by B. W. ROBINSON, M. D.

MR. PRESIDENT :—I have undertaken the performance of a duty assigned me at your last meeting—how satisfactorily you must judge. With permission, I speak of "*quam vidi et magna pars fui.*"

Of the endemic disease which prevailed in this region forty years and more ago, many have disappeared and of the remainder, the type of all has changed. The sthenic form was then the rule, and the lancet and calomel the chiefest remedies.

In the classification of fevers which claimed for their harvest time the summer and autumn months, the nosology of the systematic writers of the days of our fathers, recognized distinctively, intermittent, remittent and continued. Of the *first*, quotidian, tertian and double tertian, came under our care here, sometimes

in different, sometimes in the same year. Of the second, remittent-bilious—notably mild and manageable some seasons—the next, perhaps, markedly intensified, and threatening fatal issue, and then again so malignantly pronounced, that to “lose a paroxysm was to lose a patient.” Of the continued, synochus, synocha and typhus—the first named, and more common here, when the continued type was the belonging of the season, was intermediate to the other two. Of the last, in its graver form I have no recollection of ever having seen a pure case. But I have seen a tertian pass into a remittent and then assume the continued form, with grave symptoms and alarming character. This, in the days of which I speak, was known as typhoid, because resembling typhus, in the *muttering delirium*, *subsultus tendinum* and kindred manifestations, it indicated, that profound *cerebral* lesion and nervous prostration, which were regarded as pathognomonic of the typhus gravior, of British (systematic) writers—and *I have seen the inverted order, well preserved*. The synochus which we then saw, was essentially the so-called typhoid, of Louis. I know whereof I speak, for I well remember in the year 1837, I had charge of many cases, one, at least, of which terminated fatally. An autopsy revealed the characteristic lesions of the glands of Peyer and Brunner, (solitary and agminate) in different stages, to the extent of ulceration—and perforation of the investing coats of the intestine—Dothinerterite, of Bretonneau. One season we had a form of gastric fever which yielded to nothing, so well as cupping over the epigastrium, and ice, internally medicated was harmful.

The diseases of the winter and spring months, belonged to the order of phlegmasiæ—particularly those affecting the respiratory organs, pleurisy, pneumonia, quinsy, etc., and among children, croup. The therapeutic agents then employed were, blood-letting, general and topical, phlebotomy, arteriotomy, bloody cups and leeching—calomel, tartar emetic evacuants. The teaching and practice, was the lancet, *ad deliquum animi*, calomel in scruple doses for many repetitions and then in diminished quantity until the constitutional effect indicated by ptyalism, was induced, and tartarised antimony in $\frac{1}{2}$ grain, 1 grain, 2 grains, and larger doses, in ascending grade, until *tolerance* was obtained, according to the Italian (Rasori) method. A practice advocated by Laennec, the then authority in chest diseases.

A physician of the present day may wonder at an assumed unjustifiable practice, which the observations of *his* time would not at all warrant, but he would have been a bold man to denounce, or a timid, to hesitate to do, that which was required by the common consent of a class of practitioners quite as intelligent, patiently observing, and closely reasoning, with their then existing lights, as the profession had then, or has now in its ranks. Solidism and humoralism were mooted dogmas. Among American teachers, Chapman, the eloquent advocate of the former, was met with vigor in his enunciations by Eberle in his advocacy of the latter. The Brunonian theory was not altogether displaced by the captivating, perhaps ephemeral, doctrines of Broussais. He of the present time who accepts the cellular pathology of Virchow may plume himself on his advantages—and while asthenic conditions rule may be disposed to sneer at what *he* thinks the errors of a former day. Yet morbid causes whether emanating from climatic changes, telluric or atmospheric sources, impressing their form, may ere a great while compel a resort, though in a probably modified application to a practice once called *heroic*, but nevertheless for the time successful. Malarial elements seem to be in abeyance hereabouts now, and hygienic teachings and practice must do much to prevent the occurrence and stay the spread of maladies and to diminish the “death-rate.” But I apprehend that the cycle of time involves the cycle of disease.

The “epidemic constitution” of different years impressed varying type on the diseases of a season and necessitated a correspondingly varying treatment.

The only safe plan, was therefore, to observe and study closely the earlier cases. These would bear a tentative course, which the later ones of the advancing season would not brook with impunity. And he was unlucky who had not worked up to the occasion.

For more than a decade of my knowledge as student and practitioner, the lancet was not only borne well, but demanded. In 1842, however, the blood-letting hand had to be stayed. It was unsatisfactory and hurtful. That year furnished proportionally to the sick more fatal cases than I remember of any other year of which I was cognizant. The disease was then popularly known as brain fever—of a rather obscure, in some instances, and pronounced remittent form in others. A “touch of the typhus” as the laity

had it, or suspicion thereof, carried dismay to many a hearthstone.

The first cases of diphtheria I ever saw, occurred here in September, 1855. In a household of eleven persons embracing a grandmother, and parents, six had the disease—the mother and five children; of the latter, two died, from invasion of the larynx and trachea (croup). Two remote points in town, furnished each a case, resulting favorably, and without extension though the surroundings favored it. If another of our members had it not for the subject of a paper, for this meeting, I might be disposed to dilate.

I said, many of the diseases which had an abiding place in this region a long time ago, had disappeared. Notably two occur to me at this moment—pleuritis and what is often spoken of as old fashioned bilious fever. I have seen no example of either for the past ten years or more. Pleuropneumonia we occasionally see.

Contrasting the present with the past, the to-day, with the time referred to in the beginning of this paper, there has been noted for ten to fifteen years, a progressive sanitary improvement. It might not be gainsaid that this *was* once a sickly locality—it may not be truthfully said that it *is* now. General as well as local causes have contributed for many years to entitle us to good report, and we claim to be as exempt now from malarial and other affections, (and those occurring as tractable) as the most favored sections of the State. Our mortuary lists will attest this claim, where professional aid has been sought and rendered.

Mr. President, I am aware that this sketch is very imperfect, even in what I had proposed. My purpose was to speak of diseases *indigenous* (if I may be allowed to use the word in this connection) to this region. Many other maladies common to all sections I have not mentioned, though, of them we have had our share. We have not enjoyed more immunity from the visitations of epidemics than other places, but generally, they have assailed us, less frightfully, not perchance, for that we were better weaponed, but alert—with the good dame nature on our side and being willing to coax her, and heed her beckonings.

HISTORY OF DIPHTHERIA IN FAYETTEVILLE AND VICINITY.

Read before the Cumberland Medical Society at the December meeting, 1877, by W. C. McDUFFIE, M. D.

Diphtheria has only prevailed *as an epidemic* in Fayetteville and vicinity, twice in the past twenty-five years ; first in the summer and fall of 1862, and secondly in the summer and fall of 1876. As far as I have been able to learn, it was not known or recognized as a specific disease in an *epidemic form* in this county, prior to the first named date ; though it did occur sporadically here before that time, and in some cases with great malignancy, as the older physicians can call to mind. In August, 1862, the disease made its appearance in this place, spreading very generally over the county by the middle of September, reaching its highest point of fatality by the first of October, and it was November before the epidemic disappeared. From that time until the August of 1876, we had but occasional, sporadic cases of diphtheria. The country, however, west and north-west of us, in adjoining counties, had been frequently and fearfully scourged by this terrible enemy to childhood.

The second invasion of the epidemic in our midst occurred about the first of September, 1876, and spread over the entire community, and about the middle of November it again passed off, leaving in its wake some sad recollections of its visitation. It reached its greatest fatality about the first of October as the other did. From that time to the present, we have met it frequently in isolated cases ; while we hear again and again of its prevalence in adjoining counties as an epidemic.

The disease did not appear here in either of its visits “side by side with scarlatina.”

The type of the disease was distinctively febrile with tendency to debility, but comparatively mild, especially in the last epidemic. I say comparatively, for we must admit, that both, from correspondence and from many personal interviews with experienced and intelligent physicians of the surrounding country, who have battled with this monster year after year, and season after season—we have had a lighter or milder form than they. The ratio of deaths with us, *never* reaching twenty per cent. Why there

should be this difference, or why the disease should be modified—if indeed, it is so modified, by malarial influence, I think the present state of medical science fails to answer satisfactorily, but the history of the diseases, as far as I have been able to trace it, shows a greater virulence of symptoms in sections free from miasma, than obtain where malarial disease exists. In proof of this fact, diphtheria has not visited even sporadically, at any time, nor during either of the epidemics which we had, the section of swamp land east of the Cape Fear river immediately opposite our town and above and below, for the space of, at least ten miles. This area is thickly populated, taken upon an average, and it is well known from time immemorial it has been the very cradle of miasmatic fevers. Whether this immunity, I say, be due to existence of malaria or to some topographical advantage, I am unprepared to declare.

It is not my province in this paper to go farther than the *history* of diphtheria in this county. I shall pass over much that could be said of pathology and treatment; we must, however, understand something of its pathology as we go along with its history to enable us to answer the question as to its contagiousness; considering it proper to class it pathologically with the typhoidal febrile diseases in all of which there is an inherent tendency to degeneration of the properties of both solids and fluids throughout the system. We answer the question as to its contagious character, by saying that this impairment, above alluded to, is caused either by the introduction of some subtle poison into the blood in the form of an infection, contagion or specific miasm, which by its presence changes the character of the blood and thereby its relations to the tissues, or by some occult atmospheric condition which brings disease and death where health and life prevailed. We see in it a contagion spreading as other epidemics do, by the specific taint with which it loads the air, and at the same time, it is often observed that it is conveyed to the healthy individual by actual contact, where the exposure is great.

While the disease has not been strictly confined to children, yet it shows its favorite subjects are children from 2 to 12 years of age.

The period of incubation is a little less than one week.

All the cases do not “present the characteristic deposit” in the throat; while the peculiar membranous formation sometimes actu-

ally takes place elsewhere—on abraded surfaces and yet no sign of it on the mucous membrane.

While “persistent vomiting” is a most distressing symptom and one that has been occasionally observed at the very beginning, yet it is *not* “a certain precursor of death.”

“Is pseudo-membranous croup always to be differentiated from diphtheria?” I answer yes—the difference seems wide and distinct enough, for as one author says, “in croup the accompanying fever is symptomatic, and diphtheria is a symptomatic affection.” One is caused by cold and confined to certain seasons and sudden changes of air. The other by contagion or specific epidemical influence irrespective of atmospheric vicissitudes. The one always *purely* inflammatory; the other generically typhoid. The adventitious membrane makes them resemble each other, but that is all. In the celebrated controversy on this subject during the year 1875, published in the London *Lancet*, many eminent men took part—Johnson, Jenner, Monckton and others. The latter says: “The acute and direct strangulation which is the *rule* in croup, is really the exception in diphtheria, and further, that croup has no such immediate surroundings of faucial glandular, paralytic and scarlatinoid brethren.”

“In croup the air passages are primarily engaged, as another says, while in diphtheria the laryngeal affection is secondary to the disease of mouth and pharynx, and in croup there is absence of any characteristic odor of the breath, while in diphtheria the breath is often characteristically foetid,” and so on, many distinguishing features might be named.

My own experience has been that the form of diphtheria may vary in different epidemics to this extent; that in some seasons more die in the suffocative stage, that is asphyxiated, precisely as in death from membranous croup, while at other periods, more die of exhaustion and cardiac paralysis—just as many other diseases vary in type at different times.

The invasion of the nares by the membrane has been observed to be a very serious condition, but not always a fatal one.

The best line of treatment was found to be *constitutional support from the very beginning*; endeavor to arrest the deterioration of the blood, and to improve the general tonicity of the tissues; also to mitigate the violence of local inflammation, as it may exist.

in each individual case. Chlorate potassium has been much relied upon; quinine and iron and pure air; a mild purgative and alterative is of service at first, and to the fauces and tonsils in the first stage the local application of chlorate potassium alone may suffice, but where the exudative process appears to be going on rapidly in the throat, one of the best local applications is sulphate of copper in combination with tannin—10 grains of each to the ounce of water, as an astringent and antiseptic. In the latter stages, nothing has been found better than a saturated solution of chlorate potassium and tincture of iron, given freely as a drink, thereby serving the double purpose of a local and constitutional remedy.

As regards the sanitary surroundings, I believe we were able to have well regulated rules observed, both in country and town, and in no instance was a lack of sanitary measures the cause of the spread of the disease.

CLINICAL REPORTS.

SALIVARY CALCULUS.

To the Editors of the North Carolina Medical Journal:

You will find below a brief statement in regard to the calculus, which I cut from the tongue of Jane Yellowly. I will mention that I have another case, on whom I have once operated; it was a soft tumor, rather of a fibrous character, situated under and in the anterior third of the tongue, a little to the right of the frænum. I cut it out easily, but find that it is returning, and I propose to defer the second operation until it is fully developed. This subject is a young lady 18 years of age, in fine and vigorous health, not at all inconvenienced by the enlargement up to this date. I will let you hear from me when I operate on her again.

Jane Yellowly, colored, aged 35, general health pretty fair made application to me, stating that she had a rock in her tongue. Upon examination, I found situated in the middle third, a calculus, which

seemed to be imbedded in the muscular fibres, and not in either of the ducts of Wharton or Steno, as the flow of saliva was not in the least obstructed. The trouble complained of, was a weight, and an inability to use the organ in eating, but no difficulty in articulation. She willingly submitted to the operation, which was performed by introducing a tenaculum in the end of the tongue, held by a careful assistant, with instruction to make no more pressure than was absolutely necessary, and to control the movements of the organ. Being directly in front, I made an incision about the $\frac{1}{4}$ th of an inch in length, and down to the calculus, which was a little elongated. With the handles of the scalpel I so dilated the orifice, that with a pair of forceps I was enabled to draw out the stone.

The stone weighed 10 grains, and is represented of the natural size in the accompanying cut.

The hemorrhage was very inconsiderable, as I had with great precaution, avoided a division of any important vessel. There was some laceration immediately in the neighborhood from whence the calculus was taken. The wound healed kindly, under a mouth wash of tannic acid, is now entirely well, and the woman suffering not the slightest inconvenience.

Yours very truly, &c., JAMES W. ALSTON.

[Salivary calculi are very rare if we are to judge by the scarcity of reported cases in American, English and French journals. The only case we encountered after a diligent search was one reported in *Gaz. des Hopitaux*, in 1847, which by its description, we judge to have been of the same size of the specimen sent us by Dr. Alston. Since the above was put in type, we find a case reported in the *London Lancet*. Its composition is phosphate of lime, with a little triple phosphate.—EDITORS.]

REPORT OF A CASE OF HEMORRHAGIC MALARIAL FEVER.

By J. C. SHEPARD, M. D., Pender County.

I was called to see on November 3d, 1877, D. M. F., aged 32 years. On arrival, I found that my patient had lost a large quantity of

blood by the urethra, and was in what I considered a moribund condition. On enquiry, I found that the patient, three days previous had been attacked with quotidian intermittent.

He had also been subject to chronic chills for about a year previous, which had very much enfeebled his constitution and rendered the case unpromising and extremely unfavorable as to the prognosis. I ordered in the start ten grains sulph. cinchonidia and five grains every four hours thereafter, with fluid ext. ergot as a hemostatic and sulph. morphia, to allay restlessness and procure sleep.

On November 4th, I found the patient in much the same condition as yesterday, with urine tinged with blood, and skin of a saffron hue—had been a recurrence of chill—debility great, on being raised in bed, extinction of radial pulse and syncope. Increased dose of cinchonidia six grains every four hours, ergot and an occasional dose of morphia.

On November 5th, he had a recurrence of chill, fever high, urine normal, bowels constipated, skin very yellow, tongue heavily coated, debility not so great. I ordered three doses calomel (3 grs. each) every 3 hours until taken. Cinchonidia as the day before, and suspend the ergot.

On November 6th, slight chill, perspired some just before the chill, bowels moved, fever not so violent, skin clearing—urine normal. Reduced dose of cinchonidia to 4 grains every four hours—morphia to procure rest.

On November 7th, condition of patient considerably improved, slight coolness at, or a little after the usual hour for the chill; fever moderate, tongue clearing, urine normal. Ordered the same treatment as the day previous, with instructions to let me know if he did not do well.

On November 10th, called in great haste to see patient, on arrival, found he had a slight recurrence of hemorrhage with increased chill and fever. Ordered six grains cinchonidia every four hours—ergot as before.

On November 11th, condition improved, urine normal. Ordered the same as day previous.

On November 12th, condition much better, perspired freely, no chill, appetite returning. Ordered 4 grains sulph. cinchonidia three times per day.

On November 14th, patient still improving. Ordered the same as on the 12th.

On November 17th, convalescent, and up about the room. Ordered 3 grains cinchonidia three times per day, with 15 drops Tr. ferri. chlorid. Within one month from convalescence, patient was in perfect health and remains so at this time.

In this case, as in the other more common forms of malarial fever, I have for the last year relied almost solely upon the use of sulph. cinchonidia and can testify to its efficacy.

HEMORRHAGIC MALARIAL FEVER.

From the case-book of Wm. J. Love, M. D., Wilmington, N. C.

William B., market gardener, aged 17 years, came under treatment for intermittent fever, October 7th, 1877. He was a robust young man, of 145 lbs. weight. The usual treatment was resorted to.

On the 8th and 9th October there was no fever.

On the 10th October at 8 : 45 A. M. Thermometer indicated 104.6°, pulse 126. There was hæmaturia and epistaxis, countenance anxious, skin yellow, with nausea and vomiting. Ten grains of sulphate of quinine were directed every four hours, with milk-punch composed of 1 ounce brandy in gill of milk, and one egg, every four hours ; hypodermic injection of $\frac{1}{2}$ grain sulphate of morphia. At 9 P. M. vomiting has been relieved by the morphia until the last hour or two. Thermometer 104.6°, pulse 114. He has hæmaturia and epistaxis at intervals. Repeat the morphia. Continue the quinine and brandy treatment, with fluid extract of matico 1 3 every hour until hæmaturia subsides.

On the 11th October, 8 : 45 A. M. Thermometer indicates 102.4°, pulse 112. Less blood in the urine; three doses of matico have been administered. More or less epistaxis at intervals. Patient has vomited several times. Repeat morphia, and continue quinine and brandy mixture, and give matico when there is an increased amount of blood noticed in the urine.

1 : 50 P. M. Thermometer 104.4°, pulse 112, nausea and vomiting. There is blood in the urine—some clots. Epistaxis occasionally, lasting sometimes fifteen minutes before it can be arrested;

morphia re-administered; push matico; continue quinine and brandy mixture.

5 : 50 P. M. Thermometer 104.2°, pulse 118. There is less blood in the urine ; nausea and vomiting persist ; epistaxis continues at intervals. Matico to be pushed when urine exhibits much blood. Repeat morphia and continue quinine and brandy mixture.

10 : 30 P. M. Thermometer 104°, pulse 118. General symptoms as at last visit; treatment continued. Patient foreboding the worst.

12th October, 6 A. M. Thermometer 104.4°, pulse 112. Vomiting almost incessant. Great tenderness over the epigastrium. Add to the treatment a cantharidal blister, 10x12 inches to epigastrium.

11 : 45 A. M. Thermometer 101.8°, pulse 114. Restless; vomiting occasionally ; little blood in the urine. Epistaxis occasionally. Quinine 6 grains every four hours, other treatment continued. The patient is expressing apprehensions of death.

6 : 05 P. M. Thermometer 101.4°, pulse 119. Hæmaturia ceased, but there is epistaxis at intervals. Some nausea and vomiting ; he is somewhat delirious. Discontinue matico, but the other treatment is continued.

10 : 35 P. M. Thermometer 101.1°, pulse 114. Other symptoms as at last visit. Continue treatment.

13th October, 5 A. M. Thermometer 101.2°, pulse 108. Epistaxis with pale clots. Patient quite delirious at times. He has fears of approaching death. Continue treatment.

8 : 45 A. M. Thermometer 101.6°, pulse 118. No change in other respects.

1 : 15 P. M. Thermometer 99.4°, pulse 96. Collapse. Stomach ejects everything administered. Carbonate of ammonia 10 grains, spts. sulph. æther one drachm every hour. Leave off morphia and brandy mixture. An ounce of chicken soup every hour. Bottles of hot water in bed, and sinapisms; 2 grains of quinine every 4 hours.

2 : 30 P. M. Thermometer 99°. No other change, except that the stomach is more retentive. Continue treatment.

9 : 35 P. M. Thermometer 100.8°, pulse 104. Patient rallying somewhat. Skin is warmer ; answers questions more rationally; is still fearful of approaching death.

14th October, 9 : 05 A. M. Thermometer 100°, pulse 104. General symptoms somewhat better. Ammonia and æther in same doses every two hours. The other treatment continued.

1 : 15 P. M. Thermometer 100.4°, pulse 104. Rallying. Ammonia and æther continued every 3 hours. Continued other treatment.

15th October, 9 : 30 A. M. Thermometer 98.6°, pulse 96. Ammonia and æther every 4 hours.

6 : 15 P. M. Thermometer 100.2°, pulse 92. The ammonia and æther are discontinued, and continue quinine. Ten drops of diluted nitro-muriatic acid are now given every four hours except at night. Food every four hours. Diet is to be milk, soups and eggs.

16th October, 9 A. M. Thermometer 98.6°, pulse 96. Quinine 2 grains thrice a day ; continue the acid.

2 : 15 P. M. Thermometer 99.4°, pulse 90. Patient cheerful, and his appetite is returning.

7 P. M. Thermometer is 99.8°, pulse 99. There is no change in apparent condition of the patient. Continue treatment.

17th October, 10 A. M. Thermometer 98.5°, pulse 96. Continue treatment.

6 : 30 P. M. Thermometer 99.2°, pulse 98. His condition is as at last visit.

18th October, 9 : 45 A. M. Thermometer 98.8°, pulse 100. Patient begs to be propped up in bed, in sitting posture. No change in treatment.

19th October, 11 A. M. Thermometer 98°, pulse 90.

20th October, 12 M. Thermometer 98.8°, pulse 90.

22d October, 1 P. M. Thermometer 98.8°, pulse 78. Skin has nearly recovered its natural hue. His color is returning. Discharged with the injunction to take 2 grains quinine, morning, noon and night until after the occurrence of frost. No relapse to the 1st of January.

There were one or two evacuations of bowels during the attack, but there was no blood. The patient was relieved by enemata.

[The above case was not intended for publication, but is so carefully recorded as to make it a most graphic account of the malignant form of hemorrhagic malarial fever as we have seen it for the past few years. Recovery from such a seizure is not at all common, and we believe we could do our readers no greater service than by directing their attention to Dr. Love's very instructive case, and also to the case by Dr. Shepard which precedes it.—EDITORS.]

SELECTED PAPERS.

THE INFECTIVE PROCESSES OF DISEASE.

Being the substance of a Lecture on Pathology, delivered at the
University of London,

By J. BURDON SANDERSON, M. D., LL. D., F. R. S.; Professor-
Superintendent of the Brown Institution.

THE GERM THEORY AND ITS RELATIONS TO THE RESULTS OF THE ANTISEPTIC AND COLYTIC TREATMENT OF WOUNDS.

[ABSTRACT.]

In this lecture Dr. Burdon Sanderson proposed to consider the two theories which had been put forward in this connection with infective processes—viz: the theory of *contagium vivum*, and the so-called *germ theory*. The theory of “*contagium vivum*” taught that when a contagious disease was communicated through the atmosphere or by personal intercourse, it was produced by means of specifically endowed organisms, which bore to the disease the same relation as the seed did to the plant, being sprung from it and growing into it. The other theory—that of germs—related to a different class of phenomena, and belonged much less to the physician than to the surgeon. It taught that certain organized and living particles which were always suspended in the atmosphere were the causes of the suppuration which prevented the healing of the wounds, and that if they were excluded the wound would enter at once upon the reparative process. The whole secret, then, of the successful treatment of wounds would consist in the exclusion from them of the atmospheric dust, which had the power of contaminating all liquids that were capable of putrefaction. With all respect for authorities, he could not but express his opinion as to the value of the germ theory as the basis of the treatment of wounds. He was personally convinced of the fact that putrefactive action in wounds might be prevented with almost absolute certainty. The practice of hospitals afforded all the test necessary; and no better proof could be obtained than that derived from a comparison of the new and old methods. He had heard the opinion of the leading German pathologists, and had himself become familiar with the

benefits of the antiseptic method on the continent, some of the first results of which had been brought before the German Surgical Conference in 1874, when it was pointed out by Professor Volkmann that the question whether the germ theory was true or false ought to have no influence on the subject of antiseptic treatment, which was essentially a matter for experiment. Now, was it or was it not the case that a wounded surface would heal without the intervention of suppuration under the antiseptic method? Dr. Volkmann who had kept himself uninfected by the prevailing craze of bacteria, said that it would do so and based his answer on his clinical experience. He need not mention his results in detail, but would communicate the impressions he himself had received. No spot could be more favorable for the experiment than the town of Halle, where owing to the recent extraordinary rapid increase of the population, the hospital was far too small for its requirements, besides being one of the most detestable that could well be imagined. It was situated in the very midst of the old town, the wards were very low and opened directly into the latrines, and the beds were so closely crowded that there was scarcely room to pass between them. In short, the hospital at Halle presented an assemblage of all the circumstances as most likely to lead to the development of the worst traumatic affections. But the success obtained by Professor Volkmann was quite equal to the best results of London surgery, all the bad effects of his unfavorable surroundings being neutralized by carrying out conscientiously the Edinburgh method. From a scientific point of view, each of the successful trials which had been made of Lister's treatment during the last few years in the great hospitals of Europe might be regarded as a separate experiment, the whole series pointing to the same conclusion, that a serous surface might be exposed, and that living tissues might be incised, or even subjected to serious mechanical injury, without these parts becoming foci of inflammation, without any further reaction taking place than was necessary for the constitution of the reparative processes. London experience furnished us with examples which showed that similar skill, care, and accuracy, even when not carried out on the principles of occlusion, led to similar results. Considering the facts connected with Lister's treatment,—that, for instance, at Munich; in the year 1854, hospital gangrene affected eighty-four per cent. of the traumatic cases, but had entirely ceased since the

introduction of Lister's method, and that similar success had been obtained at Strasburg, Leipsic, and Innsbrück,—we need not be surprised to hear Lister's discovery spoken of as one of the greatest of modern times.

At present, however, the lecturer mentioned, we had simply to deal with a pathological theory. The germ theory said that the reason why a wound went wrong was that germs obtained admission to it from the atmosphere. The so-called antiseptic treatment only professed to be an application of Pasteur's experiments to a practical purpose. In both cases the same precautions were necessary, but in the laboratory experiments the criterion of success was the absence of organisms from the result. Were we, then, justified in applying the same test to the antiseptic treatment of a diseased surface? On the germ hypothesis we should be so justified, but in reality the existence of organisms in the discharges was not the true criterion of the success of the antiseptic method, the primary question being not whether the germs were sterilised, but whether their results were prevented. Consequently, whatever our doubts might be, they ought not to interfere with our acceptance of the prophylactic value of the method. Two series of observations lately published in Germany showed that though in many instances the occlusion treatment might be successful in warding off infective processes and shutting out germs, there were others in which the patients remained fever free, pain free, and inflammation free after an operation, even though organisms might have existed in the discharges. The treatment here was successful because the organisms were under conditions hostile to their development, and were, therefore, harmless. The treatment of a wound, in short, was not an experiment on spontaneous generation, but one on the pathology of infection. It was a combat not with atmospheric germs, but with diseased infectivity. Were it otherwise, the entrance of one germ would be fatal, whereas traumatic surfaces were often exposed to germs without any infective results. In how small a percentage of cases would a simple incised wound fail to heal because the knife had happened to be covered with germs. Hundreds of operations were daily performed upon animals for purposes of convenience, and yet how often did it happen that the wounds so caused refuse to heal? He would refer, again, to the operations of vaccination and subcutaneous injection, the very method of conducting which was

contrived to expose external matter to an absorbent surface. Who, he would ask, had ever heard of infective processes being set up by the use of the subcutaneous syringe? Yet it could not be argued that the wounds were too insignificant, for it was often by the smallest wounds that infection entered. Hospital gangrene, it was well known, was more likely to infect punctures and scratches than larger wounds. He thus wished to show that the three chief principles underlying the success of the antiseptic method were deeper than the surface of the wound. The first principle related to the avoidance in the wound itself of all conditions favorable to the development of infectivity. Thus, all methods tending to prevent the accumulation of blood in wounds must be of great importance, for if blood accumulated in the wounds it would be withdrawn from the colytic influences of the living tissues, and so would be liable to undergo those changes which had been described. The second principle was the avoidance of infective contamination, the sources of which formed a separate question. Wherever putrefaction had been going on for some time, there infective virus was being elaborated; consequently, ordinary filth was more or less virulent, and for that *prima facie* reason cleanliness was especially necessary. In the practice of all surgeons that principle was so thoroughly recognized, that we might hope soon to speak of surgically pure instruments just as we do now of chemically pure substances. The third principle was also of the greatest value, namely, the use of disinfectants, especially of those of proved colytic value. Of course, the benefits derived from carbolic acid, for instance, were matters of daily experience, but it was possible that in the future some better results might be obtained with other substances.

The lecturer in passing on to deal with the intervention of vegetative processes in specific infection, said that in doing so he would have to bring under notice some processes very different from those which he had already considered. The first case to which he would allude was one which lay nearest to septicæmia. The septic poison was an exclusive product of bacterial development, a product incapable of passing through certain kinds of filters, but capable of passing through other kinds. Pathologically, the poison did not act the part of a specific contagion, for a sufficient quantity of it must be introduced before the effects would manifest themselves, and these effects were directly proportionate to the quantity of poison intro-

duced ; there was, moreover, a tendency to recover from them. But every one knew that there were cases allied to septicæmia, in which the process was far more virulent. In these cases the quantity of poison required to produce the effects were measured in homœopathic doses, and the effects themselves were determined not by the quantity of poison introduced, but on the development of the processes in the organism to which it gave rise. The history of such cases was very simple. The gateway through which the poison was admitted was usually a prick or slight wound, and the primary effects might be very slight. But after some hours or days, inflammation of the lymphatics and diffused infiltration of the cellular tissue made their appearance ; the process rapidly extended, inflammation of the pleura or peritoneum set in, and death, preceded by delirium and collapse, soon followed. These results were mainly due to an extraordinary development in the organism of a specific virus. We must clearly distinguish between these appalling cases and those of ordinary septicæmia. The lecturer had shown by experiments, that if the exudation from a case of simple peritonitis were injected in a fresh state into the peritoneum of a second animal, the inflammation set up by it assumed a more serious form than in the first animal. If again, the exudation from the most serious of the cases thus produced were injected into a third animal, the results were still more intense, and the process might be repeated until a poison was at length obtained which had the virulence of the specific virus above alluded to. Substitute natural for artificial selection, and we obtained a process which could only go on in living tissue, and which was associated with a definite series of structural and pathological changes. By thus having recourse to experiment, it might be shown that by a gradual selection we could rise from common traumatic infectivity to the intensified virulence of malignant septicæmia.

The lecturer now passed on to consider the case of certain specific contagious diseases. There were only four of such diseases in which we could assign a pathological meaning to the organisms found in the body. These were relapsing fever, diphtheria, small-pox and splenic fever. The lecturer would first draw attention to the results gained by Dr. Koch, in his researches into splenic fever, a disease of great rapidity, and strikingly resembling septicæmia, except in the most rapid cases, in which a febrile stage might be distinguished.

The post-mortem appearances had also some resemblance to those of septicæmia. There were capillary hemorrhages into the mucous membranes, the red blood corpuscles were disintegrated, and the blood did not coagulate after death. But on the other hand, the disease exhibited certain special features; there was an abundant discharge from the vessels of liquor sanguinis and corpuscles, and the spleen was intensely congested. With regard to the intimate pathology of the disease, the following points must be borne in mind: The blood taken from an animal suffering from the disease was known (1) to communicate the contagion in minimal quantities. (2) It always contained the minute organisms known as bacilli. (3) If filtered through porcelain, it lost its power of communicating the disease; and (4) it could not, as a rule, be kept more than a week without losing its virulence, though in a few cases the virulence persisted. The lecturer believed that the special organism of splenic fever could exist in two distinct states, one in which it was permanent and resisting, and one in which it was easily acted upon. It would also appear that the contagion of splenic fever must exist in the blood in two forms, in proof of which he would cite some experiments which had been made in Germany in October last. The disease was communicated to a rabbit with blood which had been kept for five years, by means of a scratch, as in vaccination; the blood of the rabbit having been previously examined, and found free from organisms. The disease developed within twenty-four hours of inoculation, and proved rapidly fatal. After death the spleen was found greatly enlarged, and the blood was crowded with the organisms in question, which was well known, were much larger than those found in ordinary septic liquids, and utterly motionless. A certain portion of the blood was now taken and placed under the microscope; some of the aqueous humor of the eye was added to it, and it was carefully watched. It was then found that within the next twenty-four hours the organisms lengthened, until the field was covered with a net-work of filaments, running in different directions. The protoplasm within each filament was now seen to collect into spores at certain distances from each other. The last change was the breaking up of the filaments, and the liberation of the spores. Dr. Koch had made out, first, that the difference between the two kinds of blood, above alluded to depended on the fact that the one kind contained spores, which

retained their power of resisting putrefaction for comparatively long periods. And secondly, that the development of the organisms in the animal correspond to the development of the disease, the climax of which consisted of two parallel series of phenomena, viz. : pathological changes, and developmental or morphological changes. We had, in short, in splenic fever, distinct evidence that by a vegetative process a virus was produced, which destroyed life by multiplying with extraordinary activity in the blood and tissues of the living animal.

The lecturer then passed on to place before his hearers the facts which he possessed with regard to the other diseases of a similar kind, above mentioned. With reference to vaccinia and diphtheria, he said, we knew that they were associated with the presence of organisms, but we had no evidence of the pathogenic properties of these organisms. In both small-pox and diphtheria, the primary infection was followed by secondary lesions in other organs, and in both, the same organs were affected. These lesions were most remarkable, and consisted chiefly in endocarditis and in capillary embolisms in the liver, kidneys, and lungs. The valvular endocarditis of diphtheria, to which attention had been called by M. Legras, was the same affection as that which occurred in pyæmia, and, like it, had a doubly infective character. It was in itself the consequence of an infection, and it was the focus from which other organs were infected—the source of the embolisms which occurred in the kidneys and other organs. The endocarditis was met with in two stages. In the earlier stage, the edges of the valves were beset by a little chain of miliary elevations; in the latter stage, the process was more of an ulcerative character. The point to bring under notice here was, that diphtheria was the only disease in which the affection of the cardiac valves was associated with the development of micrococci. But these micrococci did not in the least resemble the infective organisms of splenic fever, for they showed no tendency to multiply in the blood, and they were associated with local not general processes, their relation to the latter being still undecided. The above investigations showed that though ordinary bacteria could not live in the blood, there were organisms which could; and that from masses of such organisms in the tissues very little irritation was produced, and that little was confined to the parts immediately surrounding them. Their effect was not inflam-

mation but necrosis, in the form of a dead mass enclosed and surrounded by a zone of altered tissue. There was no suppuration at the time, though subsequently the mass might become the seat of inflammation and of abscess.

In conclusion, the lecturer said, that the view which appeared to him most probably correct was, that in all the acute affections which he had mentioned, the organisms were specifically the same, but that they reciprocally modified, and were modified by the soil in which they grew. Whether they could convey the contagion must for the present, be left an open question.—*London Medical Examiner.*

THE BASES OF THE ANTISEPTIC SYSTEM.

The attention of the profession has been forcibly called of late to the doctrine and practice of Antiseptic Surgery. The address of Dr. Roberts before the British Medical Association, in August, presented the subject from the point of view of the practitioner of medicine, whilst the oration of Dr. Allen Thomson before the British Association, delivered shortly afterwards, dealt with the doctrine as it commends itself to the man of science. Still, more recently, Professor Lister has added to the experimental data which support the theory; and the presence of this apostle of the antiseptic doctrine in the midst of the surgeons of the metropolis will, no doubt, give zest to the interest which the subject so generally inspires. It appears to us that the present is no inopportune moment for a retrospective glance at the bases, theoretical and practical, on which the system is founded, for it is more than probable that errors exist, not only as to its scientific correlations, but also as to the steps by which it was established and perfected.

There is no doubt that the great theoretical basis of the Antiseptic System was laid by Pasteur in 1860. Disregarding all anterior observations, which savored more or less of hypothesis, we may look upon the experimental investigations of the French chemist as establishing, with the nearest approach to scientific precision, the ~~norm~~ theory of fermentation. By such is meant the doctrine that

fermentive decompositions are brought about, not by any occult property of changeable organic matter, but by the direct agency of living organisms. It is needless to say that this doctrine has been very strongly contested and severely criticised ever since. M. Pouchet at first, with a very strong following, opposed to it the theory of Heterogeny, the teaching of which was that the organisms which attended fermentations were spontaneously developed in putrescible fluids, and were not disposing agents. Subsequent observers have announced their adherence to this latter doctrine with various modifications, but it is scarcely too much to say that their followers are a vanishing number ; for rigid scientific investigation has tended more and more to establish the points—first, that fermentive and putrefactive decompositions are closely correlated with the presence of minute living organisms ; and secondly, that the absence of such living particles from the most highly decomposable fluids is strictly in relation with the efficiency of the means employed to exclude them. It is needless, however, to dwell on these points, for the germ-theory of fermentation and putrefaction is a necessary postulate to the antiseptic system. If that be not conceded, the system can have no scientific existence.

We read in Professor Allen Thomson's address that Professor Lister "had the merit of being the first to apply the germ-theory of putrefaction to explain the formation of putrid matters in the living body ; and he has founded on this theory the now well-known antiseptic treatment of wounds, the importance of which it would be difficult to over-estimate." With every disposition, however, to accord to Professor Lister the distinction of having elaborated and perfected the method, we cannot conclude from a review of the history of the subject that he initiated it.

Let us turn to what we may term the practical basis of the antiseptic system in surgery. We may define this as the method whereby putrefactive decomposition on the surface of wounds of the tissues is prevented, and thus a great following of evils and dangers abrogated. The disinfection of wounds is no novel proceeding. In 1859, M. Démeaux employed a powder consisting of a mixture of tar and plaster-of-Paris (a compound which had been patented the year previous) for disinfecting wounded surfaces. In the same year M. M. Lemaire and Lebœuf used an emulsion of tar, prepared by means of saponine, for the like purposes. This saponine was ex-

tracted from the bark of *Quillaya saponaria*, and was found to have the property of suspending in a very perfect manner the insoluble tar in the form of a saponaceous emulsion. Velpeau reported against it, but, nevertheless, its use gained ground, and in 1862 the Administration of Civil Hospitals in Paris authorized its employment in all the establishments. It may be urged, however, that it was employed just as hosts of other lotions and applications had been used previously—to keep wounds “sweet,” and with no special reference to the doctrines of putrefaction, or the question of the advent of septic germs ; but this could not be said in 1860, for in the same year that Pasteur communicated his thesis to the Academy of Sciences, Lemaire published a pamphlet (“Du Coaltar Saponiné”), in which he narrated eighty observations made on the human subject and on animals, and in which he distinctly defined the application of the coal-tar emulsion to be (1) the prevention of putrefaction by direct action upon the septic germs, and (2) the arrest of the production of pus. Lemaire showed that the active agent in the tar was carbolic acid, and in 1863 he published his work entitled, “De l’Acide Phénique : de son Action sur les Végétaux, les Animaux, les Ferments, les Vénins, les Virus, les Miasmes ; et de ses Applications à l’Industrie à l’Hygiène, aux Sciences Anatomiques, et à la Thérapeutique.” A second edition was published in 1865. In this work it is not too much to say that the antiseptic method in surgery was distinctly inculcated. The antiseptic treatment of wounds, comminuted fractures, burns, and necroses, is fully described. After having cited a case of compound comminuted fracture of the bones of four fingers, successfully treated, Lemaire adds—“This observation appears to me to offer an important teaching as regards surgery. In fractures with crushing, amputation is recommended. Here we have seen that, in spite of cold water dressing, counselled in like cases, for twenty-four hours the suffering kept increasing. It is almost certain that, if I had contented myself with this treatment suppuration would have been established, and amputation have become inevitable. Coal-tar emulsion being employed, the pain is at once relieved, and after twenty-four hours rendered null, cicatrization of bones and soft parts is effected, and everything preserved. This good result obtained in the case of four bones not only evidences the remarkable properties of coal-tar, but appears to me to indicate the employment of this method in cases of fractures of the

limbs with crushing, before having recourse to operation." Lemaire is also explicit as to the efficacy of antiseptics in controlling suppuration. He asserts that he can arrest and reproduce at will the formation of pus, just as he can arrest and reproduce fermentation and germination; and he adds, "If my theory be true, we ought to be able to prevent the formation of pus by the use of emulsion of tar before the tissues are involved in inflammation."

Here, then, we have both *ratio* and *modus* of the antiseptic system. We have yet to consider, however, the precise relation supposed to subsist between suppuration on the one hand, and putrefaction, fermentation, or the access of germs on the other. On this point, Lemaire expressed very decided views, though most of us will probably think that he past far beyond the just limits of scientific inference. He considered that the formation of pus was directly due to the advent of germ-laden air, that the globules of pus were comparable to those of yeast, and that they had an analogous function and an identical origin.

Whatever view we may adopt as to the origin of pus, we must agree that it is no material which is, by origin and development, foreign to the organism; it is the degraded protoplasm of the organism itself. The pus-cell, however, though possessed of active vitality, does not minister to the nutritive needs of the organism in which it is developed, but, by multiplying and augmenting, acts as a foreign body, and, pressing on the surrounding tissues like a mechanical agent, causes progressive necrosis. Pus-cells indicate, according to Professor Lister, "the extreme of excess of quantity and impairment of quality in the product of abnormally excited nutrition." We have abundant evidence that the excitation due to putrefactive decomposition is a most potent and fatal cause of pus-formation, but we cannot hold that it is the *sole* exciting cause. We know that pus will form as a consequence of direct violence, and in situations where the advent of germ-laden air is in the highest degree improbable. We know, moreover, that the very agents which in dilution prevent pus-formation, when too strong, can induce it. It seems, therefore, only reasonable to conclude that putrefaction, though probably the chief, is not the only exciting cause of suppuration.

History then teaches us that the authors of the Antiseptic System were Pasteur and Lemaire, who formulated its principles in 1860.

It was not until 1867 that Professor Lister made public his method founded on these principles, but it will be agreed on all hands that he has done a most valuable work in elaborating with all the earnestness of a truly scientific observer, both the theory and practice of antiseptic surgery.—*Medical Times and Gazette*, Jan. 5th.

CORRESPONDENCE.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES,
PARIS, January 1st, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—The Marshall President having yielded to the demands of the nation, peace and confidence have been restored, and things are moving smoothly again throughout France. It is, therefore, to be presumed that the medical men of the country will eschew their political proclivities and return to the pursuit of science and the curing of diseases. Although, the tendencies of medicine elsewhere are conservative, here they are essentially radical. The number of physicians in the new Chamber is very large, while the moderates can count but two votes among them.

The latest excitement in medical circles is an *autopsy club*, which holds its regular meetings at one of the principal restaurants, where good dinners are discussed, and its irregular re-unions at the houses of its dead members in order to study pathology and anatomy as they are revealed in the mortal remains of their former comrades. Each member on the evening of his initiation signs a legal document by which his body after death becomes the property of the surviving "fellows," with the understanding that it is to be thoroughly dissected, and used in any way that the interest of medical science may suggest. Some very prominent professional men are said to be connected with this movement, and the whole thing is *bona fide* and serious to the last degree. The inspiration to this novel organization is to be found in the fact that the popular prejudice against autopsies has surrounded them with such a host of perplexing legal

formalities, as almost to preclude the possibility of effecting them at all. A special *authorization* has to be obtained in every instance, which always involves much circumlocution, while the consent of all the relatives within a certain range of connection has to be secured before a single step can be taken in the matter. In the hospitals, of course, a very different state of things prevails, and but few difficulties present themselves in the way of pathological research and anatomical study.

The last meeting of the Academy of Medicine was chiefly devoted to elections. M. Panas, the distinguished surgeon of Lariboisière, was chosen to replace the lamented Dolbeau, by an imposing majority. Professor Richet, who is the best teacher of surgery in France at the present moment, was called to the Vice-Presidency by 72 votes out of 75 ballots. M. Henri Roger, was, by acclamation, continued in the office of Secretary, which is one of the most important and honorable known to the profession. The other officers held over, and will discharge their respective functions during the coming year.

In order that you may form some idea of the diseases prevailing here at present, and of the condition of the public health, I beg leave to present the last "Bulletin de Mortalité," published by Dr. Worms, the physician to the Prefecture of the Police. "Paris, population, according to the census of the year 1876: 1,988,806 inhabitants. During the last week, there have been reported 968 deaths—that is to say, 25.3 per 1,000 of inhabitants—as follows: typhoid fever, 19; measles, 23; scarlet fever, 1; small-pox, 0; diphtheria, 28; bronchitis, 43; pneumonia, 66; infantile diarrhoea, 0; cholera, 0; dysentery, 1; puerperal affections, 5; erysipelas, 6; other acute affections, 235; chronic diseases, 434—of which 154 were caused by phthisis; surgical diseases, 49; accidental causes, 17. Total number of deaths, 968. Although the indefiniteness of this report is surprising in view of the advanced state of medical science in this great metropolis, it nevertheless, shows that at this season of the year, the death-rate from pulmonary disease is unusually high—a circumstance which should be duly considered by those who imagine that only health and happiness await them on this side of the water. The large number of deaths from rubeola, is to be accounted for, by the fact that a great number of physicians believe, that, the surest method of treating the disease is to keep the apartment at

a temperature of 70°, to cover the patient with innumerable blankets, and to administer only hot drinks, *ad infinitum*. Under this depressing treatment, the robust may not be seriously damaged, but the weak, though possibly cured of the disease, are left in so profound a state of prostration as to prevent the possibility of recuperation.

Two very distinguished medical men have recently died in France, viz: Gintrac and Barth. The *former* long held a commanding position in the Medical School of Bordeaux, and greatly distinguished himself by his numerous works on medical subjects—especially that, published in 1853, entitled “Cours Théorique Clinique de Pathologie interne et de Thérapie Médicale.” He was also an officer of the Legion of Honor, associate member of the Academy of Medicine, and correspondent of the Institute of France. These distinguished honors were all won by a life of labor and devotion, and they stamp him as one of the leading medical men of his day and generation. The *latter* has been so intimately associated with the advancement of medical science in France as to have acquired a world-wide reputation. When the Academy by an almost unanimous vote nominated M. Barth, in 1854, to a position in the section of pathological anatomy, it recognized in him, not only a pathologist of the most profound erudition, but a clinician of the greatest skill, and it gladly added its crown of laurels to those which he had so brilliantly won in other fields of science. Each *concours* was, in fact, the occasion of a still more imposing triumph; for in all of them he secured the highest position, and was much commended by his judges. This superiority was due alike, to the qualities of his mind and of his character—was won by his great intelligence, the zeal and persistence of his labors, the singular devotion to duty which always inspired him, the kindness and compassion which he ever displayed for his patients, and the loyalty to his friends, and respect for his masters, of which his active life was an exemplification. Among his numerous scientific works, those on the “Obliteration of the Aorta,” “Ruptures of the Heart,” the “Dilatation of the Bronchi,” are, perhaps, the most excellent, and have served to give him the greatest reputation. As a teacher, he had no superior, as was attested by the crowds of anxious and enthused students who followed him; while his skill as a diagnostician was established by the

records of thousands of the most rigorous *post-mortem* examinations. As a member of the Academy he was laborious, exact, impartial and thorough. As its President, he distinguished himself by the courtesy and firmness, with which he directed its proceedings, and by the learning and research which he brought to bear upon all scientific discussions. In a word, he was a great physician and a truly good man; and he will long be mourned and honored in France. The record of his life is illustrated by the highest honors known to his countrymen, for he was an officer of the Legion of Honor, President of the Academy, perpetual President of the Medical Association of the Seine, honorary President of the Clinical Society of Paris, and the trusted friend of the most illustrious of his compatriots in science, letters, art, politics and religion.

Having attended M. Thiers in his last illness, he was much affected by his death, and sought temporary repose by a short trip to Italy. Unfortunately for himself and humanity, he contracted a malarial fever in Rome, and died in a short time from the effects of it.

The Academy of Sciences has just received two announcements which have created much interest among its members. M. Raoul Pictet telegraphs from Geneva that he has succeeded in liquefying oxygen by a pressure of 320 atmospheres and 140° Centigrade. M. Cailletet also reports from Chatillon-Sur-Seine, that he has not only had the same success with oxygen, but that he has succeeded in liquefying oxide of carbon as well. This leaves only two gasses still resisting liquefaction, viz: hydrogen and nitrogen, and gives a new impetus to chemical work.

Dr. Cazin has just reported to the Academy of Surgery a very interesting and successful operation for occlusion of the intestine, performed upon a young man 28 years of age.

Without going into details, I will simply state the conclusions at which he has arrived in regard to gastrotomy, as they are of great practical value, and have a very distinguished endorsement.

1. Gastrotomy is an operation which is applicable to certain cases of internal strangulation—those which are produced by bands and twists, and those which result from invagination.

2. It is not necessary to know exactly the seat of the stricture before interfering.

3. Delay in operating always diminishes the chances of success.

taking care to introduce the needle deeply into the tissues, the tendency to local inflammation is very materially lessened.

In a recent discussion in the Academy of Medicine, M. Delore stated that it is his custom to introduce this agent into the tissue of the womb itself. By means of a speculum he exposes the organ, and directly punctures it—with the result of inducing an action much more prompt and decided in its character than when the medicine is taken into the stomach or introduced beneath the skin according to him, the hemorrhage is immediately resisted, the patient is permanently relieved and no ulterior evils ensue. M. Duply, although persuaded that the benefits ascribed to the subcutaneous employment of ergot, had been somewhat exaggerated, had seen patients greatly benefitted by it. M. Panas thought that by using a solution of Bonjean's ergotine less risk of local irritation was encountered, and more certain results were secured. He suggested, however, that an abatement of pain might be due to the effect *rather of the water* than of the *drug* injected. Professor Sée had repeatedly observed both an arrest of hemorrhage and an abatement of pain after subcutaneous injections of ergot, and felt sure that the *water* introduced was not the curative agent. Several other medical men expressed similar views and it seemed to be the general verdict that this mode of medication is a valuable one and worthy the confidence of the profession.

Vidal, at the Hospital, St. Louis, goes a step farther and treats uterine prolapsus in the same manner and with equally happy results. It is also stated that Tarnowsky, of St. Petersburg, who has had unusual success in the management of uterine flexions, relies to a great extent upon this mode of treatment as an important auxiliary to the operative measures which he employs.

I have recently had occasion to introduce ergot under the skin in two instances, and both the most gratifying effects. In the *one* case, I succeeded in promptly arresting an alarming hemorrhage caused by a fibroid, and in the *other*, in securing the immediate contraction of the womb, which, after the final effort in the expulsion of a placenta, had suddenly dilated to its fullest capacity, and presented egress to the most copious stream of blood that I had ever seen rush from a woman.

In view of all of these facts, the scepticism which has prevailed with so many in regard to the therapeutical potency of ergot, must

give place to an active faith in its virtues ; while the conclusion is irresistible that the proper way to employ it is subcutaneously.

In connection with the subject of hypodermic medication, I must add, that in the last number of the "Bulletin Général de Thérapeutique Médicale and Chirurgicale," Dr. Luton, of Reims, publishes an exceedingly interesting article in which he gives numerous instances of the radical cure of congenital inguinal hernia, by the subcutaneous injections of salt water. He uses a saturated solution, thoroughly filtered, and introduces it in quantities of ten drops at various points along the course of the inguinal canal—with the result of inducing a sufficient amount of adhesive inflammation to prevent the further escape of the gut from the abdominal cavity.

As I have already made my letter so much longer than I had intended, I feel constrained to defer the details furnished by M. Luton, to another occasion.

Very truly and respectfully yours,

EDWARD WARREN, (Bey) M. D., C. M.

OUR NEW YORK LETTER.

NEW YORK, January 18th, 1878.

There has been, within the year, an additional handsome structure put up upon the grounds of the Woman's Hospital, in which the patients are now accommodated. Some very serious defects in the drains of the old building necessitated its evacuation. In erecting this new one, the governors asked the advice of the medical staff, and then followed their own notions, dividing up the floors into small rooms, in spite of the assurance that better average results are obtained in large wards. And it is believed that the many stud partitions will eventually become reservoirs of foul air, to influence unfavorably the statistics of the hospital. All is now beautiful and wondrously clean.

A visitor, during Dr. Emmet's service, cannot fail to note much that is interesting. The clinics are delivered in a clear and unaffected manner, as if the speaker had no thought of self, but only of his subject.

tracted from the bark of *Quillaya saponaria*, and was found to have the property of suspending in a very perfect manner the insoluble tar in the form of a saponaceous emulsion. Velpeau reported against it, but, nevertheless, its use gained ground, and in 1862 the Administration of Civil Hospitals in Paris authorized its employment in all the establishments. It may be urged, however, that it was employed just as hosts of other lotions and applications had been used previously—to keep wounds “sweet,” and with no special reference to the doctrines of putrefaction, or the question of the advent of septic germs ; but this could not be said in 1860, for in the same year that Pasteur communicated his thesis to the Academy of Sciences, Lemaire published a pamphlet (“Du Coaltar Saponiné”), in which he narrated eighty observations made on the human subject and on animals, and in which he distinctly defined the application of the coal-tar emulsion to be (1) the prevention of putrefaction by direct action upon the septic germs, and (2) the arrest of the production of pus. Lemaire showed that the active agent in the tar was carbolic acid, and in 1863 he published his work entitled, “De l’Acide Phénique : de son Action sur les Végétaux, les Animaux, les Ferments, les Vénins, les Virus, les Miasmes ; et de ses Applications à l’Industrie à l’Hygiène, aux Sciences Anatomiques, et à la Thérapeutique.” A second edition was published in 1865. In this work it is not too much to say that the antiseptic method in surgery was distinctly inculcated. The antiseptic treatment of wounds, comminuted fractures, burns, and necroses, is fully described. After having cited a case of compound comminuted fracture of the bones of four fingers, successfully treated, Lemaire adds—“This observation appears to me to offer an important teaching as regards surgery. In fractures with crushing, amputation is recommended. Here we have seen that, in spite of cold water dressing, counselled in like cases, for twenty-four hours the suffering kept increasing. It is almost certain that, if I had contented myself with this treatment suppuration would have been established, and amputation have become inevitable. Coal-tar emulsion being employed, the pain is at once relieved, and after twenty-four hours rendered null, cicatrization of bones and soft parts is effected, and everything preserved. This good result obtained in the case of four bones not only evidences the remarkable properties of coal-tar, but appears to me to indicate the employment of this method in cases of fractures of the

limbs with crushing, before having recourse to operation." Lemaire is also explicit as to the efficacy of antiseptics in controlling suppuration. He asserts that he can arrest and reproduce at will the formation of pus, just as he can arrest and reproduce fermentation and germination; and he adds, "If my theory be true, we ought to be able to prevent the formation of pus by the use of emulsion of tar before the tissues are involved in inflammation."

Here, then, we have both *ratio* and *modus* of the antiseptic system. We have yet to consider, however, the precise relation supposed to subsist between suppuration on the one hand, and putrefaction, fermentation, or the access of germs on the other. On this point, Lemaire expressed very decided views, though most of us will probably think that he past far beyond the just limits of scientific inference. He considered that the formation of pus was directly due to the advent of germ-laden air, that the globules of pus were comparable to those of yeast, and that they had an analogous function and an identical origin.

Whatever view we may adopt as to the origin of pus, we must agree that it is no material which is, by origin and development, foreign to the organism; it is the degraded protoplasm of the organism itself. The pus-cell, however, though possessed of active vitality, does not minister to the nutritive needs of the organism in which it is developed, but, by multiplying and augmenting, acts as a foreign body, and, pressing on the surrounding tissues like a mechanical agent, causes progressive necrosis. Pus-cells indicate, according to Professor Lister, "the extreme of excess of quantity and impairment of quality in the product of abnormally excited nutrition." We have abundant evidence that the excitation due to putrefactive decomposition is a most potent and fatal cause of pus-formation, but we cannot hold that it is the *sole* exciting cause. We know that pus will form as a consequence of direct violence, and in situations where the advent of germ-laden air is in the highest degree improbable. We know, moreover, that the very agents which in dilution prevent pus-formation, when too strong, can induce it. It seems, therefore, only reasonable to conclude that putrefaction, though probably the chief, is not the only exciting cause of suppuration.

History then teaches us that the authors of the Antiseptic System were Pasteur and Lemaire, who formulated its principles in 1860.

It was not until 1867 that Professor Lister made public his method founded on these principles, but it will be agreed on all hands that he has done a most valuable work in elaborating with all the earnestness of a truly scientific observer, both the theory and practice of antiseptic surgery.—*Medical Times and Gazette*, Jan. 5th.

CORRESPONDENCE.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES,
PARIS, January 1st, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—The Marshall President having yielded to the demands of the nation, peace and confidence have been restored, and things are moving smoothly again throughout France. It is, therefore, to be presumed that the medical men of the country will eschew their political proclivities and return to the pursuit of science and the curing of diseases. Although, the tendencies of medicine elsewhere are conservative, here they are essentially radical. The number of physicians in the new Chamber is very large, while the moderates can count but two votes among them.

The latest excitement in medical circles is an *autopsy club*, which holds its regular meetings at one of the principal restaurants, where good dinners are discussed, and its irregular re-unions at the houses of its dead members in order to study pathology and anatomy as they are revealed in the mortal remains of their former comrades. Each member on the evening of his initiation signs a legal document by which his body after death becomes the property of the surviving "fellows," with the understanding that it is to be thoroughly dissected, and used in any way that the interest of medical science may suggest. Some very prominent professional men are said to be connected with this movement, and the whole thing is *bona fide* and serious to the last degree. The inspiration to this novel organization is to be found in the fact that the popular prejudice against autopsies has surrounded them with such a host of perplexing legal

formalities, as almost to preclude the possibility of effecting them at all. A special *authorization* has to be obtained in every instance, which always involves much circumlocution, while the consent of all the relatives within a certain range of connection has to be secured before a single step can be taken in the matter. In the hospitals, of course, a very different state of things prevails, and but few difficulties present themselves in the way of pathological research and anatomical study.

The last meeting of the Academy of Medicine was chiefly devoted to elections. M. Panas, the distinguished surgeon of Lariboisière, was chosen to replace the lamented Dolbeau, by an imposing majority. Professor Richet, who is the best teacher of surgery in France at the present moment, was called to the Vice-Presidency by 72 votes out of 75 ballots. M. Henri Roger, was, by acclamation, continued in the office of Secretary, which is one of the most important and honorable known to the profession. The other officers held over, and will discharge their respective functions during the coming year.

In order that you may form some idea of the diseases prevailing here at present, and of the condition of the public health, I beg leave to present the last "Bulletin de Mortalité," published by Dr. Worms, the physician to the Prefecture of the Police. "Paris, population, according to the census of the year 1876: 1,988,806 inhabitants. During the last week, there have been reported 968 deaths—that is to say, 25.3 per 1,000 of inhabitants—as follows: typhoid fever, 19; measles, 23; scarlet fever, 1; small-pox, 0; diphtheria, 28; bronchitis, 43; pneumonia, 66; infantile diarrhoea, 0; cholera, 0; dysentery, 1; puerperal affections, 5; erysipelas, 6; other acute affections, 235; chronic diseases, 434—of which 154 were caused by phthisis; surgical diseases, 49; accidental causes, 17. Total number of deaths, 968. Although the indefiniteness of this report is surprising in view of the advanced state of medical science in this great metropolis, it nevertheless, shows that at this season of the year, the death-rate from pulmonary disease is unusually high—a circumstance which should be duly considered by those who imagine that only health and happiness await them on this side of the water. The large number of deaths from rubeola, is to be accounted for, by the fact that a great number of physicians believe, that, the surest method of treating the disease is to keep the apartment at

a temperature of 70°, to cover the patient with innumerable blankets, and to administer only hot drinks, *ad infinitum*. Under this depressing treatment, the robust may not be seriously damaged, but the weak, though possibly cured of the disease, are left in so profound a state of prostration as to prevent the possibility of recuperation.

Two very distinguished medical men have recently died in France, viz: Gintrac and Barth. The *former* long held a commanding position in the Medical School of Bordeaux, and greatly distinguished himself by his numerous works on medical subjects—especially that, published in 1853, entitled “Cours Théorique Clinique de Pathologie interne et de Thérapie Médicale.” He was also an officer of the Legion of Honor, associate member of the Academy of Medicine, and correspondent of the Institute of France. These distinguished honors were all won by a life of labor and devotion, and they stamp him as one of the leading medical men of his day and generation. The *latter* has been so intimately associated with the advancement of medical science in France as to have acquired a world-wide reputation. When the Academy by an almost unanimous vote nominated M. Barth, in 1854, to a position in the section of pathological anatomy, it recognized in him, not only a pathologist of the most profound erudition, but a clinician of the greatest skill, and it gladly added its crown of laurels to those which he had so brilliantly won in other fields of science. Each *concours* was, in fact, the occasion of a still more imposing triumph; for in all of them he secured the highest position, and was much commended by his judges. This superiority was due alike, to the qualities of his mind and of his character—was won by his great intelligence, the zeal and persistence of his labors, the singular devotion to duty which always inspired him, the kindness and compassion which he ever displayed for his patients, and the loyalty to his friends, and respect for his masters, of which his active life was an exemplification. Among his numerous scientific works, those on the “Obliteration of the Aorta,” “Ruptures of the Heart,” the “Dilatation of the Bronchi,” are, perhaps, the most excellent, and have served to give him the greatest reputation. As a teacher, he had no superior, as was attested by the crowds of anxious and enthused students who followed him; while his skill as a diagnostician was established by the

records of thousands of the most rigorous *post-mortem* examinations. As a member of the Academy he was laborious, exact, impartial and thorough. As its President, he distinguished himself by the courtesy and firmness, with which he directed its proceedings, and by the learning and research which he brought to bear upon all scientific discussions. In a word, he was a great physician and a truly good man; and he will long be mourned and honored in France. The record of his life is illustrated by the highest honors known to his countrymen, for he was an officer of the Legion of Honor, President of the Academy, perpetual President of the Medical Association of the Seine, honorary President of the Clinical Society of Paris, and the trusted friend of the most illustrious of his compatriots in science, letters, art, politics and religion.

Having attended M. Thiers in his last illness, he was much affected by his death, and sought temporary repose by a short trip to Italy. Unfortunately for himself and humanity, he contracted a malarial fever in Rome, and died in a short time from the effects of it.

The Academy of Sciences has just received two announcements which have created much interest among its members. M. Raoul Pictet telegraphs from Geneva that he has succeeded in liquefying oxygen by a pressure of 320 atmospheres and 140° Centigrade. M. Cailletet also reports from Chatillon-Sur-Seine, that he has not only had the same success with oxygen, but that he has succeeded in liquefying oxide of carbon as well. This leaves only two gasses still resisting liquefaction, viz: hydrogen and nitrogen, and gives a new impetus to chemical work.

Dr. Cazin has just reported to the Academy of Surgery a very interesting and successful operation for occlusion of the intestine, performed upon a young man 28 years of age.

Without going into details, I will simply state the conclusions at which he has arrived in regard to gastrotomy, as they are of great practical value, and have a very distinguished endorsement.

1. Gastrotomy is an operation which is applicable to certain cases of internal strangulation—those which are produced by bands and twists, and those which result from invagination.

2. It is not necessary to know exactly the seat of the stricture before interfering.

3. Delay in operating always diminishes the chances of success.

WEIGHT AND PULLEY EXTENSION, &c.

In reply to several letters of enquiry about the historical items given in our January number, we cite some additional authority for most of which we acknowledge our indebtedness to our learned friend, Dr. Henry A. Martin, of Boston, who kindly made the extracts for us.

Our researches did not extend beyond American surgical annals, for if they had, we would have described the origin of the principle since adopted by Daniell and others, in the "Couch and Jackstone of Hildanus."*

John Bell says about this device : * * * "But surgeons did at last fall upon a method which absolutely ensured the permanent extension ; for being wearied with this perpetual turning of screws to tighten the bands round the ankle, they at last most happily thought of putting a pulley to the foot of the bed, and hanging a good jack-stone to the heel. I have (in next page) drawn the bed, the sur-cingle or horse-girth for the body, and the jack-stone of Hildanus for hanging to the heel, and according to my poor conception, the method of permanent extension was by this rendered so perfect, that Mr. Dessault could do nothing but disgrace himself by attempting any further improvement.

Every step we proceed in this history weakens the plea of Dessault to originality, and, what is more important, demonstrates the folly of all such attempts. If this be not an anticipation of Dessault, if this girth do not "prevent the body from gravitating toward the fractured limb, if this jack-stone do not prevent the limb being retracted towards the body," there must be something in the theory and practice of Mr. Dessault passing all comprehension."

Of the employment of adhesive strips by Gooch, already referred to, we present the following extract :

"To answer the same purpose, I have confined one end of a strong strip of sticking plaster, of a suitable length and breadth, under a circular piece of the same, about the middle of the side of the foot, carrying it over the heel, up the leg, and confining the other end above the calf with another circular plaster, first, gradually bring down the Muscul. Gastrocnem. as far as they will readily

*Principles of Surgery, by John Bell, Edinbrugh, 1801.

yield ; giving the limb, at the same time, the position described in my treatise on wounds. On the like occasion, I have also fixed one strap by the circular about the foot, and another by that above the calf of the leg, passing the one through a slit in the other, and using them as the uniting bandages ; but then two more circulars are requisite to confine the other ends of the longitudinal straps securely."

"Medical and Chirurgical Observations as an Appendix to a former Publication, by Benjamin Gooch, Surgeon, London, printed for G. Robinson, in Pater Noster Row and R. Beatniffe, in Norwich." No date, but about 1771.

Of the Pennsylvania doctors who employed adhesive plaster in traumatic surgery, mention will be found in *Sargent's Minor Surgery*.*

The priority of invention is not so much a matter of glorification of names, as it is of interest to the student who is seeking to trace the steps by which surgery is achieving its daily success. The utilization of adhesive plaster by Dr. Crosby, entitles him to a high rank as a surgeon of fertile resource, and it has opened ways for new devices which, perhaps would have been impossible without it.

CATALOGUE OF THE NATIONAL MEDICAL LIBRARY.

Public good sometimes grows out of public calamity, and a most remarkable instance of this is the great good which has been achieved by the Surgeon General's Department in creating a surgical museum of almost unequalled extent and value, and even a greater and better work in accumulating an immense medical library of "40,000 volumes properly so called, and about the same number of single pamphlets," all we may say, the outcome of the terrible conflict between the States. Taken together, surely we speak within bounds when we say that the money appropriated for the Medical Department, has yielded a better return to the nation than a like sum otherwise invested. That there has been a faithful and labored application to all the duties of this department is

*p. 177-78 text and note. Blanchard & Lea, 1862.

evinced by the immense amount of literary and scientific labor performed. The three huge volumes entitled "Medical and Surgical History of the War &c.," at once placed American surgery and medicine before the world as the equal of the older nations, and in a way which could never have been attained by the efforts of any body of medical men without the aid of the government.

The NATIONAL MEDICAL LIBRARY embraces an immense collection, ranking it among the largest in the world, and it is rapidly increasing. This Library is accessible to physicians who care to consult it, for six hours of the day, putting within the reach of medical authors and students, works which until its establishment could not be consulted except by a trip to Europe. But such a collection as it stands cannot be readily consulted. No amount of industry could make it available to the visiting physician except by a residence of some weeks or months in Washington. This difficulty has at last been nearly overcome by the industry of the learned Librarian Surgeon Billings, who has prepared the most complete catalogue yet compiled, a "Specimen Fasciculus" of which was published in 1876. Its method is all that could be desired. An inspection of this specimen will convince any one. The references are from the general to the more special heads, and are so arranged that under one head may be found what Surgeon Billings modestly calls an outline of bibliography, but in the numerous cases we have examined it, it seemed a marvel of minuteness. The references under the head ABORTION, for instance, occupies nearly thirteen columns quarto, of which five and a half columns refer to bound volumes, four columns to articles in periodicals, and the remainder is taken up with the jurisprudence of the subject. The type used is so varied, that catch-titles and names of authors are found with the least amount of labor. The manuscript is ready whenever the authority comes from Congress to print it. The request is now before Congress for an appropriation of \$25,000 to commence the work, and it is hoped they will not grudge the sum asked, but forward it with all needed assistance. We are not speaking our opinions merely, but the doctors in all parts of the country unite in this, by no means unreasonable request. All this great work cannot be completed until this index has been printed, and put within the reach of the large number of American medical students.

REVIEWS AND BOOK NOTICES.

REPORT OF THE BOARD OF DIRECTORS AND SUPERINTENDENT OF THE INSANE ASYLUM OF NORTH CAROLINA ; for the official year ending Nov. 30th, 1877.

Dr. E. Burke Haywood, President of the Board of Directors, in their behalf, calls attention to the condition of the asylum, dwelling especially upon the fact that by comparing six institutions of like character in the United States, the appropriation to our asylum is the smallest, viz : a per capita appropriation of only \$226 62, and it is also the smallest appropriation ever made since the institution was founded. This pinching appropriation made it necessary, in the opinion of the Directors, to cut down the salaries twenty per cent. in addition, as we understand it, to lopping off the extra pay voted by the Board of Directors in 1871. Here is economy of the most unjust and unwise sort. A great commonwealth entrusting its insane, "many of whom have been distinguished in the colleges, schools, legislatures, and learned professions," to skilled officers, agreeing to a certain amount of pay, and then on the score of economy reducing the appropriation to so small a sum that the asylum must go in debt, or else ask the amiable officers to take less than the sum agreed upon. It is a wonder these SOLONS had not thought of saving the money out of their own *per diem*—but they did not.

The Superintendent, Dr. Grissom, in his report says, "that during the past year we have been again blessed with the same comparative immunity from sickness and death, which the low per centage of mortality has exhibited for years past, in our history."

"The cures upon admissions have been 24 per cent., and including the much improved have been 40 per cent. The deaths upon number under treatment have been nearly 5 per cent."

"Of the admissions during the year, the cause of disease is reported to have been mental in 14 cases ; physical in 27 ; unknown in 12."

"The form was mania in 35 cases ; melancholia in 10, and dementia and imbecility in the other cases. The average duration before admission of those received, is represented to have been over two years."

Dr. Grissom very correctly calls attention to a matter which he has often reiterated, that "too often golden moments of early recognition and speedy cure are lost, before some outbreak forces the conviction of the dread reality upon the friends of the victim."

* * * * *

The highest number under treatment at any one time was 287, the lowest 264, and the daily average 278.

Then follows an elaborate statement showing the material circumstances of those admitted during the year, of each case discharged "recovered," each case discharged "improved," each case discharged "unimproved," and of each case of "death."

The Superintendent also calls attention to the fact that the promised provision for the insane colored people has not been accomplished. This is much to be regretted, as the committee entrusted with this work have had ample time to give some shape to their designs. It is unjust to both races, that the negroes should not be provided for at once, thereby relieving the physician in charge, of a surplus of patients, and giving the remaining whites more breathing space. That "it is not safe to carry all your eggs in one basket" is as true of insane hospitals as of any other, and the Directors for the proposed asylum for the colored people would do well to terminate their pilgrimages from town to town and settle upon some definite scheme. Hot haste is reprehensible in such important matters, but with this, our new Board cannot be charged. It is but justice to Dr. Grissom and his valued assistant Dr. Fuller, and it would be a mercy to those poor unfortunates who are making every county poor house and jail hideous with their wailings, that the Board should either act, or stand aside for a new one that would not have to palaver so long.

Upon the whole, Dr. Grissom may congratulate himself that interference by the Legislature—a very mixed and very variable, and of late years a very inexperienced body, has not extended to more serious matters than limiting his means. Let it suffice that politics has carried some of the unfortunate inmates into the asylum, and let us pray that the ruthless hand of the politician may be kept off such sacred things.

Dr. Burke. Haywood calls pathetically upon the Governor for aid. He says: "I appeal to Your Excellency, to use your influence with the next Legislature to make an appropriation for the Insane Poor

of North Carolina, which will, at least, place them on an equality with those of other States as to a per capita allowance." We hope the Governor will have success in prevailing upon the Legislature to do what they are paid to do—their duty; and we furthermore suggest that each member of the incoming Legislature be furnished with the REPORT OF THE BOARD OF DIRECTORS AND SUPERINTENDENT and his attention especially called to it.

THE ACTION OF MEDICINE, by ISAAC OTT, A. M., M. D.; formerly Demonstrator of Experimental Physiology, University of Pennsylvania. With 22 illustrations, 8vo. pp. 168. Lindsay & Blakiston, 25 S. 6th Street, Philadelphia. Pa. Price \$2 00.

We are indebted heretofore, for the most part, to German, French, and English sources for our knowledge of the physiological action of remedies, and we are pleased to see that such investigations in this country have a hopeful beginning. The work before us begins with a chapter on How to study the physiological action of remedies, giving directions as to the animals used, Feeding and preservation of animals, Fostering of Animals, Physiological Anatomy, Anæsthesia, Electrical Apparatus, Administration of Medicines, &c., the matter under these heads being sufficiently explicit for the guidance of the student in the physiological laboratory. It was to supply the lack of a hand-book on these subjects that the author began his work.

The second division of the volume is upon the action of medicines. 1st. On the Lower Animals, 2d. On Man in Health, 3d. Action in Disease. The number of medical substances treated in this way is quite limited, the largest space being given to new remedies and their alkaloids, and some of the old drugs that are again candidates for professional favor. The manner of treatment can be better shown by a few extracts here and there.

ALCOHOL.

“Action on Lower Animals.”—In the frog it causes restlessness, the respiration and heart-beat are accelerated, then slowed, the reflex excitability is lessened by an action on the nerve-centres, followed by heightened reflex excitability, and finally complete insensibility to external agents occurs with arrest of the heart; the muscles and nerves preserve their irritability. In warm-blooded animals it produces a state of excitement, with muscular prostration, abolition of intelligence, and immobility to external

agents. In dogs after recovery, there is stupidity, and timidity, with incomplete paralysis of the posterior extremities, their arterial tension being at first elevated and then reduced. The vasomotor centre during the reduction of pressure is inexcitable, which would lead to the conclusion that the elevation of arterial tension was due to stimulation; the heart-beat is increased, then decreased, and finally augmented." * * * *

"*On Man.*—It excites first the cerebrum, then the cerebellum, then the medulla spinalis, finally the medulla oblongata, afterwards depressing their functions. During the stage of excitement the brain is hyperæmic, whilst in depression there is anæmia. It reduces the temperature, preceded at times by a slight rise. On persons used to the drug, it exerts hardly any effect on the heat of the body. When pure alcohol is ingested, it leaves no taint to the breath, which, if observed is due to fusel oil or the ethers. It is mainly oxidized in the body, forming finally carbonic acid and water, which products are excreted by the lungs. It may be excreted as alcohol by the skin and kidneys. It reduces the amount of urea in the renal excretion, and the carbonic acid given off by the lungs." * *

"*Action in Disease.*— * * * In fevers it acts by its stimulant action on the nerves and circulatory apparatus, with the reduction of temperature, and serving "*as a nutriment.*" This opinion agrees with the following statement of Forthergill in his hand-book of treatment. "If alcohol is oxidized in the body, then alcohol is a food or furnisher of force." * * * *

In speaking of Chloral-Hydrate, Dr. Ott merely mentions that "Leibreich states that it is an antidote to strychnia," whereas we expected to see some more satisfactory array of experience. There are very many well attested cases of the success of chloral as an antidote to strychnia, and among others, cases reported to the North Carolina Medical Society by Drs. Porter, H. W. Faison, and Picot.

Under the head of *Tobacco* we had hoped to see verified or disproved some of the experiments made by Professor Schiff on *nicotin*. The results of some of his experiments seemed to confirm Moleschott's statement that frogs may live a long time without disturbance after ligature of the liver and all the hepatic vessels. Not a frog, the liver of which has been tied, dies when 1-30th of a drop of *nicotin* is injected into a noose of the intestine. If the liver has been tied, a frog dies after the injection of 1-80th of a drop into a lymphatic sac, while a healthy frog will survive such an injection, and not exhibit any very characteristic symptoms. Other lesions or ligatures do not diminish the tolerance of frogs for small doses of *nicotin*. If the liver of a rabbit or a large piece of one of a dog be triturated in a mortar, and four drops of *nicotin*

rapidly mixed with it, the red juice pressed from this through a cloth, may be injected into the cellular tissue of a small dog without killing it or producing alarming symptoms. But if for the liver, the kidneys are substituted, violent poisoning is produced, which is not the case when the juice of the kidney, uncombined with nicotin is employed. In these experiments it appeared that "the liver destroyed the lethal properties of nicotin, and prevented convulsions, fibrillary contractions, tetanus, and the alarming symptoms in general."*

We had occasion to mention in our January number, Dr. Ott's studies on the poisonous action of the active principle of some of the Agaracini and its antagonism to atropia, and take pleasure in adding this additional information from the "Action of Medicines." "*Muscarin*" (the active principle of the fungus *Agaricus muscarius*, fly mushroom) "excites the chorda tympani, atropia paralyzes it; muscarin excites the cardio-inhibitory apparatus, atropia paralyzes it; muscarin contracts the pupil, atropia dilates it; muscarin increases intestinal peristalsis, atropia decreases it; muscarin decreases the urinary secretion, atropia restores it."

For the benefit of those of our readers who have not formed the habit of carrying *apomorphia* with them in their pocket-case we will quote lastly, that "apomorphia is an emetic, even in asphyxia, when introduced subcutaneously."

It is not very likely that the medical men of to-day will be willing to neglect the opinions of "paper physiologists," as our author calls them, by way of distinction from the laboratory physiologists, until the methods of the latter have arrived at more precision. It is not so easy to forget the very great discrepancy between the current clinical opinion of the action of mercury and that arrived at by the Edinburgh Committee; for although the report of the latter seemed to shock the medical world, its recovery has been very complete, and the clinical observers still have the best of it. We like Dr. Ott's book though, and hope he is just paving the way for more extensive researches in the physiological action of medicines.

FERNS OF NORTH AMERICA, by Professor DANIEL C. EATON, Yale College, Part II; S. E. Cassino, Salem, Mass.

Botanical students will find this work a valuable assistant in de-

*Medical Times and Gazette, June 9th, 1877.

termining species and bringing together in one volume all the ferns known in North America; and amateurs will find in it a guide to the collection and naming of their ferns unequalled by anything known in this country before. The three chromo-lithographic illustrations are gems of the American press and the work is worth having for the art's sake, if not for the love of the study of ferns. Now that fern-hunting is such a passion, the exhaustion of a large edition of this work may be looked for.

MEDICAL ANNOTATIONS.

ESMARCH'S METHOD IN PAINFUL ULCERATIONS, &C., AND DR. HENRY A. MARTIN'S BANDAGE.

Dr. Bernhard Cohn, of Steiglitz, relates two cases in which induction of artificial anæmia by the bandage was followed with great relief; and begins the details of a third case, in which a practical cure resulted after all other modes had been exhausted. After a few applications of the bandage of from fifteen to sixty minutes, the improvement was so great that the limb of a patient who had been suffering with white-swelling, could be moved in all directions or handled without pain, enabling the patient to bring the entire sole of his foot to the ground in walking. Dr. Cohn declares that in practice the idea that the increase of blood in capillaries, which follows the removal of the bandage will entirely undo the effect of previous anæmia, is not sustained. He considers that the bandage acts mainly by relieving the congestion of the inflamed part, and perhaps, by improving the condition of diffusion between the tissues and the blood-vessels. "How often can and ought the constriction to be renewed?" and "Is it better to use single *long* compression, or frequent short ones?" require further experience to answer satisfactorily. (Berlin. Klin. Wochenschrift.)

These latter questions are satisfactorily answered by Dr. Henry A. Martin, of Boston, in an article to the *Chicago Medical Journal and Examiner* entitled, "*Surgical uses of the Strong Elastic Bandage other than Hæmostatic.*"

For over twenty-five years he has made use of a strong bandage of India rubber, for the treatment and cure of all ulcers of the lower extremity of a non-specific character, coming at all

within the category of curable, and as a most efficient aid and palliation of those of a specific nature, and those incapable of a perfect cure by any method of treatment.

Dr. Martin's bandage very much resembles Esmarch's and was in use by him many years before the appliance of the latter distinguished gentleman was made known. Dr. M. had a decided theoretical conviction that the deep arterial circulation could not be controlled in this way, and therefore disclaims being the originator of what is known as Esmarch's bandage.

The bandage recommended by Dr. Martin is made of the best Para rubber, and he has saved those who desire to employ this treatment very much trouble, by having the strips made and cut at the factory, in the way his experience shows to be best.*

The bandages, (10½ feet long, 3 inches wide), are to be applied by taking one turn just above the ankle, then one over the instep, round the sole of the foot, then round the ankle and, spirally, up over the leg, to the knee, at which point what remains unapplied should be wound round the limb, and the tapes firmly tied. No skill is required in its application, and it can be entrusted to the patient. The best time to apply it is before the patient rises from bed in the morning, and if it is applied so loosely then as barely to prevent slipping, when the erect posture is assumed it will be comfortably snug. No œdema of the foot follows the proper application of the rubber bandage.

The patient wears the bandage all day, and at bed-time he removes it. The skin will be found moist with sweat, and it should be carefully dried. The bandage should be wiped with a wet sponge and hung up to dry at once. If there is an eruption of the skin, washing it before the application of the bandage with Packer's tar soap will be serviceable. An eruption of small papules is quite common following the use of the rubber bandage.

Dr. Martin adds: "In perhaps, the worst case I ever saw of this sort of ulcer ("chironian"—round or roundish as if punched out of the much-thickened skin with hard, white, almost cartilaginous edges) in an old, feeble, ill-nurtured patient, who had been off and on, under treatment for nearly nine years, whose ulcer had been nominally "cured" again and again, and in each instance, almost immediately on resuming labor, the cicatrix had broken down, I used the bandage alone, as a test case. Of course, I could have expedited the cure by removing the gristly edges of the ulcer by caustic or the knife, but I depended on the bandage only, and in four months during which the patient continued to labor without any intermission, his ulcer was solidly and well healed, and has now, for nearly five years remained so. I may say here, that not only with this method is the patient *allowed* to continue his ordinary avocations, however laborious, but is much better able to work while wearing the bandage than he would be without it. This is partic-

*Messrs. T. Metcalf & Co., 89 Tremont St., Boston, keep them on hand.

ularly to be noticed in all varicose conditions of the leg." The Martin bandage has been applied successfully in the following diseases and accidents :* In cases usually called sprain or subluxation of a joint, consisting mainly of injuries or even rupture of one or more ligaments, this bandage is applicable, and has the advantage over the plaster or starch bandage in enabling the patient to exercise the limb, thus averting anchylosis, atrophy of the muscles or ligaments. Also in disease of the bursæ mucosæ, in œdema and anasarca ; in erysipelas and erythema ; cutaneous affections ; in injuries to bones, especially cases of "green-stick" fracture ; in rheumatism and neuralgia ; in varicose veins, as a substitute for the laced stocking.

The author promises us further observations of this valuable means, and is willing to answer enquiries upon the points in question.†

We have had some experience in this method of curing stubborn ulcers, and from our success with the ordinary roller bandage and elastic stocking, we were prepared to believe that great things may be done with the bandage of Dr. Martin, and we can add that in three cases of varicose ulcer in which we have tried it, we have obtained good results.

TRANSFUSION OF SMALL QUANTITIES OF BLOOD FOR ANÆMIA.

Transfusion seems not to have found its proper level as a remedial measure, but if a more extended employment of small quantities of blood by the direct method shall meet with as good success as in a case reported by Professor Oré, it will no doubt be a matter of daily application. We are indebted to the *London Medical Examiner* for the account of the following case : A young married woman, had suffered from intermittent fever, hæmorrhage after abortion, neuralgia and convulsions. She became a second time pregnant, and her condition was much aggravated by violent and incessant vomiting. The stomach rejected all food, the anæmia became intense, and her prostrate condition gave rise to serious apprehension. A drop of her blood being placed under the microscope was found to be violet in color, and to contain numerous white blood-cells. The red corpuscles were altered in shape and had ragged borders ; one drop of blood was estimated to contain 1,008,255. Forty grammes (about $\frac{2}{3}$ ounce,) of human blood was injected by the direct method, and all the symptoms commenced to improve. The vomiting ceased on the day after the operation, and the patient evinced a strong desire for food. The blood being examined eight days afterwards, 1,818,500 red corpuscles were found in one drop ; these had recovered their normal form and the consistence and color of

*Trans. Medical Association for 1877, pages 601-608.

†Address, 27 Dudley St., Boston, Mass.

the blood were natural. Six weeks after the transfusion, the number of red corpuscles was found to be increased three-fold. All the distressing symptoms had subsided and the patient's health was greatly improved. Oré concludes that a rapid proliferation of fresh normal blood corpuscles may be produced by the injection of a very small quantity of blood.

It has recently been shown that enough blood can be injected with a hypodermic syringe, to arrest immediate collapse, and that it is not necessary to defibrinate the blood. *The precaution to be observed, however, cannot be too strongly impressed, that the blood should be injected VERY SLOWLY.*

LIQUEFACTION OF NITROGEN, HYDROGEN AND ATMOSPHERIC AIR.

Since the announcement in the letter of Dr. EDWARD WARREN, our Paris correspondent, dated January 1st, of the liquefaction of oxygen, information comes to us from the *Journal des Débats* through the *London Times*, that M. Cailletet, (December 31st), who eight days previously had succeeded in liquefying oxygen, was equally fortunate with nitrogen and hydrogen, although, perhaps, it might be said that in the case of the latter gas the performance was not thoroughly complete. * * * The nitrogen was reduced to the condition of little drops, while the hydrogen became visible in form of a vapory cloud. The nitrogen was liquefied under a pressure of 200 atmospheres, and in the case of the hydrogen 280 atmospheres. In both cases the temperature was reduced to 300° below zero centigrade.

M. Cailletet took some air, which he thoroughly dried and purified from carbonic acid, and liquefied it in the same apparatus. When he turned the cock the metamorphosed air trickled out, like some perfumed liquid from an evaporating bottle. The demonstration that it is possible to obtain "lumps of air" is one of the greatest victories of modern physical chemistry. The 31st of December ought to be a memorable anniversary in the scientific calendar.

With these new additions to our list, we await with intense anxiety to know if liquefied oxygen can be made permanently so, and if it may not have a remedial application of exceptional value.

ERGOTIN IN FIBROID TUMORS OF THE UTERUS.

Prof. Simpson dwelt particularly upon the treatment of tumors of the uterus with ergotin, in his late address before the Edinburgh Obstetrical Society. Much of the failure of ergot was due to the inertness of the drug. When Professor Hildebrant, of Königsberg, demonstrated the safety and certainty with which an active dose of

ergotine could be administered hypodermically he made a step of immense importance in the satisfactory treatment of uterine fibroids. From two to five grains of ergotin, can be counted on with great certainty to excite appreciable contractions in the walls of uteri in which the muscular fibres have become hypertrophied. Three grains may be regarded as the medium dose to be given daily, or every second day, or twice a week after the influence of the drug begins to be manifested. Professor Simpson directs that the hypodermic needle be inserted perpendicularly down, right into the muscular strata, selecting the abdominal or gluteal regions, as the best points. Cardiac disease does not constitute a contra-indication to its employment. The cases most likely to yield to this treatment are those in which the tumors are intra-mural, so that being surrounded by layers of muscular fibre and being compressed by its contraction are pushed downwards more rapidly to the uterine orifice, and their nutrition being interfered with, and they may undergo fatty degeneration, or wither, or are extruded.

A SIMPLE PLAN FOR EVACUATING THE PLEURAL CAVITY.

Surgery advanced from Bowditch's canula and trocar to the aspirator, and this last device completes the needed supply. Dr. Girgensohn, of Riga, taps the chest with an ordinary canula and trocar, withdraws the latter, and slips over the end of the canula a caoutchouc tube three to six feet long, and of a suitable diameter, closed at the lower end with a clip or small stop-cock, and provides himself with a 1 to 2 per cent. solution of carbolic acid. The tap is then opened under the surface of the solution of carbolic acid in a large vessel placed at a lower level than the opening in the chest, so that the tube is converted into a syphon. A serous effusion of six to eight pounds weight, can be in this way evacuated in a quarter of an hour. If the stream stops from any cause, the tube can be alternately compressed and allowed to expand, so as to exert a pumping action on the fluid higher up. Where it is absolutely essential to prevent air entering the chest, Girgensohn recommends the trocar to be passed through the wall of the caoutchouc tube, into the upper end of which the canula is tied; the tube is then filled with carbolic solution from a funnel inserted into the raised lower end, so as to completely expel all air. The trocar is inserted with the canula into the chest, and withdrawn gradually until the necessary communication between the tube and the chest is established, and then completely withdrawn, and the tube slipped forward over the canula and tied, so as to close any opening left by the trocar. The fluid is then drawn off siphon fashion as before. The author claims for his method the advantages of simplicity, and that the whole apparatus is easily cleansed and kept in order.—*Medical Times and Gazette, Berlin Klin. Woch.*

EXPLOSION OF A CHLORATE OF POTASSIUM MIXTURE.

A correspondent of *New Remedies* reports a case of explosion in the following circumstances. The following prescription was made :

R

Tinct. ferri chloridi

Glycerinæ puræ

Potassii chloratis āā ʒ ss. m.

The above was intended to be farther diluted for a gargle, being put up in this compact form for convenience. The correspondent placed it in his satchel, where after a while it exploded with great violence. The editor of *New Remedies* shows that the explosive compound formed was not nitro-glycerine, but thinks it is highly probable that it was the substance which Davy termed euchlorine, a compound which explodes at 70° C. (126 F). Warning is necessary now that chlorate of potassium enters into so many diphtheria prescriptions. It is not that practitioners need instruction, but reminders of these dangers. That chlorate of potash cannot be mixed with powdered tannin, sulphur, and phosphorous is already known ; now we add this new caution.

GOA POWDER IN PSORIASIS.

Reports are now being monthly added to the efficacy of chrysophanic acid in psoriasis, an account of which we gave in the January number of the JOURNAL. Another report comes to us from the *Indian Medical Gazette*, by Theobald Ringer. He reports the case of a patient who had suffered from an obstinate and intractable attack of psoriasis, which after resisting all kinds of treatment finally yielded to Goa powder. It will be remembered that chrysophanic acid is the active principle of this powder. The diseased parts were gently rubbed with a wet sponge, and a little of the powder was applied with the finger. This was repeated every morning, and acted admirably ; in a fortnight the disease which had worried the patient for eighteen months had quite disappeared. The same patient had suffered at the same time with agonizing attacks of facial neuralgia for which quinine was administered in solution in hydrobomic acid, and was administered effectually ; but Dr. Ringer is sure the Goa powder cured the psoriasis. It will be seen that in this case phosphorous was not given.

COLLECTANEA AND ANSWERS TO CORRESPONDENTS.

THE LONDON SECULAR PRESS ON DOCTORS.

“Of such inestimable value are the services rendered to society by the medical profession—and especially by its leaders, who have mastered its deepest secrets, who hold in their hands the mighty power of alleviating human suffering, upon whose wisdom and judgment hang often the issues of life and death—that they are fairly entitled to receive from the verdict of public opinion the remedy they are so loth to claim for themselves. Nor must it be forgotten with what industrious and praiseworthy effort all such have fought their way up to the topmost rungs: the years of patient persevering study and concentrated thought; the long struggle with adversity before fame came with full hands; the constant warfare with contagious deadly disease, in which are imperilled not only their own valuable lives, but those of their dear ones at home. More than one, whose name is familiar on every tongue, has seen his family decimated thus, or has been brought to death’s door himself again and again, by the fell enemy he has made it his proud ‘specialty’ to combat; recovering slowly to find, perhaps, that in his enforced absence others have nearly outstripped him in the race, and he has to begin the world anew. It is not such men as these—the good genii, neither more nor less, of the human race—who should be subjected to the losses and humiliations we have described. Their life is one long round of continual harrassing anxieties, of perpetual discomfort, of infinite toil. They take their meals by snatches, standing, or in their carriages as they are whirled to and fro; their rest is constantly broken; they can never call a single hour wholly or entirely their own. Self-sacrificing, indefatigable, uncomplaining—so great and good is the work they do that they deserve a reward, unstinting, cheerfully rendered; not grudgingly, sparingly, tardily or not at all. A doctor’s fee is essentially a debt of honor; yet more, it is a debt of gratitude, and it should be guaranteed with all the assurances of a solemn and irrefragable bond.”—*Lancet*, from *London World*.

A FULL HEAD OF URINE AS A DILATOR OF THE URETHRA.

An old practice has been recently revived (*Bulletin de Thérapeutique*) of dilating the urethra by compression exerted just behind the glans just before passing urine. Here is the summary: 1. That dilatation produced by resisting the desire to pass the urine until considerable quantity has accumulated, and the compression

exerted behind the glans as above stated after a gonorrhœa of some duration, may act as a prophylactic of stricture. 2. If the stricture has not advanced very far, if it does not restore it, it will make micturition easier. 3. It is useful after urethrotomy in retarding relapse. 4. It may prove of some service in varices of the prostate, neck of the bladder, and membranous part of the urethra. 5. Another class of cases it is useful in, viz : those cases of elderly persons with enlarged prostate in which the urethral canal is twisted out of the normal course.

The inclination in gonorrhœa, stricture and enlarged prostate is to empty the bladder frequently, and instructions to restrain the desire will succeed in but a limited number of cases, but it is well to know that such a means promises relief, especially to those who have not daily access to the advice of a surgeon.

TO REMOVE FOREIGN BODIES FROM THE EAR.

Mr. James Keene, F. R. C. S., in London *Medical Examiner* describes a safe way to remove foreign bodies from the external auditory canal. Use a syringe with a fine probe-pointed nozzle, the stream of water being directed towards that part of the meatus where there is a space between the walls of the canal and the foreign body. The liquid will thus penetrate behind, and will, if it is not too firmly impacted, gradually wash it out. Should this fail, as it will sometimes, a very simple instrument can be extemporized from the bristle of an ordinary house-brush formed into a loop between the points of a hair-pin. With a little care this may often be inserted behind the foreign body, which will then be easily removed. A loop of this kind is not rigid enough to injure the membrana tympani, even though it were to press upon it, and if properly handled, will not drive the foreign body further into the ear.

Dr. Dieulafoy points out, in the *Gazette Hebdomadaire*, that the cause of sudden death in typhoid fever is due rather to reflex influence upon the heart, from irritation of the great sympathetic in the intestines, and not to cerebral anæmia, embolism, hemorrhage, &c., as variously held.

Dr. Thoulouse recommends as a vesicant a disc of fine cloth soaked in oil, and besprinkled with corrosive sublimate, in fine powder.—*Medical Press and Circular*.

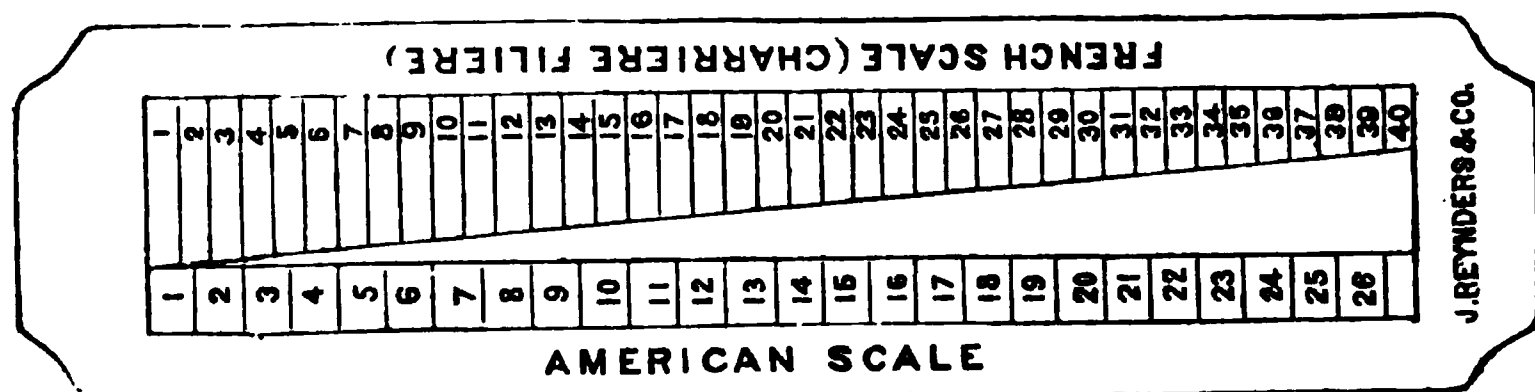
Dr. Jaillard, of Algiers, employs the microscope for the detection of butter adulterated with animal fats such as suet. Under the microscope butter globules are round, while other fats appear in needle-shaped or branched crystals.—*New York Medical Record*.

ROOT OF BLACK-GUM OR TUPELO FOR TENTS AND BOUGIES.

The root of *Nyssa aquatica*, black-gum, sour-gum, or tupelo tree as it is variously called, is recommended to substitute sponge and sea-tangle for dilating the os uteri. The material is abundant, and its well-known properties as utilized in the Southern States during the war, incline us to believe it will answer the purpose designated.

We find by experiment, that if the soft interior of the root be cut into pieces the size desired for a tent, fill the pores with tragacanth or gum arabic mucilage, which it readily takes up, and wrap firmly with stout flax thread, it can be compressed into one-third or one-quarter its original thickness.

It has the advantage of being easily divided with the grain, and roots can be easily obtained to make bougies of any desired length. It is not even necessary to use the mucilage in preparing the tents or bougies, as very considerable compression can be made by simply wrapping, or rolling between two smooth surfaces. Its elasticity is not equal to sponge and sea-tangle, but it is easy to work, and within the reach of nearly every one, and it is susceptible of a finish which cannot be given to either of the substances named, and excels sea-tangle in the toughness of its fibre.



The accompanying cut represents (half size) a simple, convenient and accurate "catheter gauge," devised by Dr. Handerson, of New York city. It consists of a metal plate, perforated by a triangular opening 169.33 mm. (6.67 in.) in length, with a width at the base of 13.33 mm. (0.525 in.) This opening is graduated to both French (Charrière) and American (Van Buren) scales, while the reverse side of the plate contains the nearest approximation to the so-called English scales, with a comparative scale of English inches and French millimetres. The catheter, sound, etc., to be measured, is simply inserted in the base of the opening, and slid towards the apex as far as it will go, when the parallel lines will at once indicate its size according to either scale.—*Medical Record*, No. 361.

A NEW LIVING DOUBLE MONSTER.

In the *Wiener Med. Woch.*, for December 9, Professor Hesche, furnishes the description of an examination he has made at Vienna,

of a living girl, seventeen years of age, who exhibits an example of a still rarer form of monstrosity than the Siamese twins, or the two-headed Nightingale, inasmuch as in her case the formation, in place of the upper part of the body being double as in their cases, it consists in a doubling of it only below the second lumbar vertebra, the upper portion resembling that of a pleasing delicate girl from ten to twelve years of age. The specimen is a case of Förster's *Dipygus tetrapus*.—*Medical Times and Gazette*, January 19th.

ANALYSIS OF THE MILK OF AN ESQUIMAUX WOMAN.

Among the Esquimaux women, who are at present at the Paris Jardin d'Acclimation, is a young mother who is sucking two infants. Dr. Condereau undertook the analysis of her milk in order to compare it with that of Europeans. He found that while it contained a smaller proportion of salts, it is richer in sugar and especially in fat. This richness in the hydro-carbons accords with the habitual regimen of the Esquimaux, who resist cold by the consumption of an enormous amount of fatty bodies.—*Medical Times and Gazette*, from *Union Méd.*

THREATENED STRIKE OF DOCTORS.

A great sensation has lately been produced at Havre, by the issue of a circular to their patients by the doctors of that city. It is nothing less than the menace of a strike on the part of the doctors, who announce a rise in the tariff of their fees. In future, every visit sought for as urgent, or at a fixed hour, is to be charged as a double visit, and every night-visit will be taxed according to the established classes, 10 fr., 15 fr., or 20 fr. *Le Havre* says that this exorbitant pretence has excited general indignation.—*Gaz. Hebd.*

EXCISION OF LARYNX AND REPACEMENT BY AN ARTIFICIAL ONE.

Dr. Foulis, of Glasgow, (*Medical Times*) attended the last meeting of the Medical Society of London, and brought with him the man upon whom he lately performed the operation of excision of the larynx. He also exhibited the artificial larynx by means of which the patient was enabled to read out loud, and converse. Professor Tyndall lent to the Society for the evening one of König's revolving mirrors, so that the waves of sound were demonstrated, the voice being produced by various reeds, each representing a musical note.

DIGESTION OF AN OSTRICH.

An Austria military paper says that some bread issued to the Russian soldiers in Bulgaria has been recently examined in Vienna, and found by analysis to contain 19 per cent. of saw-dust and 14 per cent. of sand! A crumb of comfort in this, to the late Confederate soldier who got scanty weight of *solid bread*, and was rather pleased with its indigestibility as it stayed by him longer.

ANOTHER FUCUS.

A correspondent reminds us that the *fucus vesiculosus* which we mentioned in the January number of the JOURNAL is not the only candidate for honors in this genus, but that the *fucus helminthocorton* was lauded by Wm. Farr, F. R. S., in 1822, as a remedy for cancer, and that it became sufficiently prominent to draw forth satirical comment in the *Medico-Chirurgical Review*.

PRESENCE OF COMMON SALT AS AN INDICATOR OF SEWAGE CONTAMINATION.

Professor Lattimore, of Rochester, says: "Whenever the proportion of salt in well-water rises above a very few grains per gallon, contamination by sewage or house-drainings may be confidently asserted."—*Popular Science Monthly*, February.

BOOKS AND PAMPHLETS RECEIVED.

Action of Medicines, Isaac Ott, M. D. ; Lindsay & Blakiston, 25 S. 6th St., Philadelphia.

Ophthalmic and Otic Memoranda. By Professors Roosa and Ely; Wm. Wood & Co., 27 Great Jones street, New York.

Transactions of the American Medical Association, Vol. 28, 1877. Printed for the Association. Collins, Printer, 705 Jayne street, Philadelphia.

Cantho-Plasty as a Remedy in Certain Diseases of the Eye. By C. R. Agnew ; G. P. Putnam & Sons, 4th Avenue, and 23d street, New York.

On the Dressing of Stumps. By Louis Bauer, M. D., M. R. C. S., England. Reprinted from St. Louis Clinical Record.

Report of Board of Directors and Superintendent of the Insane

Asylum, of North Carolina. Official year ending Nov. 30th, 1877, Raleigh; Edwards & Broughton.

Ferns of North America. By Professor Daniel C. Eaton, of Yale College: S. E. Cassino, Naturalist's Agency, Salem, Mass., Part II. Price \$1.

House Air the Cause and Promoter of Disease. By Professor Frank Donaldson, M. D., University of Maryland; Reprinted from Maryland State Board of Health Reports, 1878.

A Succinct History of the Plan of Treatment of Potts' Disease by Suspension, and the use of the Plaster of Paris Bandage. By Lewis A. Sayre, M. D.; Reprint from the Richmond and Louisville Medical Journal, 1878.

Michigan Medical News, Detroit, Michigan.

Annual Report of the Columbia Hospital for Women and Lying-in-Asylum, for year ending June 30th, 1877. P. J. Murphy, M. D., Surgeon in charge; Washington Government Printing Office, 1877.

Is the Human Eye Changing its Form under the Influence of Modern Education? By Edward G. Loring, M. D., New York, 1878.

Analysis of Ten Hundred and Sixty Cases of Asthenopia. By C. R. Agnew, M. D., New York; D. Appleton & Co., 1877.

A Contribution to the Differential Diagnosis between Hollow Uterine Polypus, and complete inversion of the Uterus. By G. E. Sussdorf, M. D., New York; Reprint from American Journal Obs., 1877.

Malaria and Struma, in their relation to the Etiology of Skin Diseases. By L. P. Yandell, Jr., M. D., Louisville, Ky.; Reprint from American Practitioner, January, 1878.

OBITUARY.

DR. WARREN B. SHORT.

Dr. Warren B. Short, died recently at his home in Flemington, N. C., on the 3d of February. He was on the threshold of his professional life, with every promise of usefulness and distinction.

DR. RASPAIL.

Dr. Raspail, the venerable and eccentric French physician and versatile scientist, died last month. He was known better on this side of the Atlantic by the mixture of camphor and salt in water, and known by the name of Raspail's lotion.

DR. EDMUND R. PEASLEE.

Dr. Edmund R. Peaslee died in the city of New York, of pneumonia, on January 21st, 1878, in his 64th year. He occupied a

very prominent position in the profession, taking high rank as a gynæcologist.

His contributions to periodical medical literature were frequent and of a high order. For some years he has occupied the chair of gynæcology in Bellevue Hospital Medical College; he was also one of the Surgeons to the Woman's Hospital, and was thus a participant in the late unfortunate controversy which grew out of the management of that institution.

He wrote and published in 1854, a work on "Human Histology &c.," in which the experiments of Robin and Verdeil were first made known to the profession in America.

WM. STOKES, M. D., D. C. L., F. R. S., &c.

The career of this great teacher and physician was ended by his death on Monday, January 7th. He had attained the advanced age of 74 years, and continued the discharge of the duties of his office of member of the General Medical Council for Ireland, until May, 1877, when he resigned.

The works which will be remembered as his greatest are "Treatise on the Diagnosis and Treatment of Diseases of the Chest," (1837); "Diseases of the Heart and Aorta," (1854); and his "Lectures on Fever," (1874).

Dr. Stokes contributed many articles to the "Cyclopædia of Practical Medicine." From 1832 to 1842 he was co-editor with Dr. Graves, of the *Dublin Journal of Medicine*.

"In nothing" observes a biographer "did Stokes more shine than as a teacher of medicine by the hospital bed-side. His pupils—and they are reckoned by hundreds—never ceased to recite how thorough was his investigation of a case, how accurate his diagnosis, and how often prophetic was his prognosis. * * * * *

During all his life he was a man of lasting and affectionate personal friendships, and was surrounded by a circle who were as fond as they were as proud of him. His memory will long be dear to them, and his place will be sadly missed amongst them; and now that he is taken, many other tongues besides theirs will join in saying, and sincerely feeling, that William Stokes has left behind him no nobler specimen of our Celtic race—nature, intellect and culture."

"Oxford gave him its honorary D. C. L., in 1865. and Cambridge its honorary LL. D., in 1874. In 1875 the German Emperor presented him with the envied Prussian order "*Pour la Mérite*," in company with such distinguished men as Longfellow, Bancroft, and Schwann. Edinburgh also conferred its honorary LL. D.

Like all really great men in our profession, his intellect would not bear the trammels of mere money-getting doctoring. He was a great physician and permitted no pursuit to interfere with his study of his profession and his care of his patients; but he was something more—a man of ardent literary and scientific taste, an astute observer, and a zealous worker in many extra professional pursuits."—*Medical Press and Circular*.

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

TROMMER'S EXTRACT OF MALT WITH COD-LIVER OIL AND PHOSPHOROUS.

Professor Markoe, of Boston, recently called attention to the fact that extract of malt afforded one of the best means for emulsifying cod-liver oil, and a short time previously Dr. Squibb had called attention to cod-liver oil as a substance best calculated to protect phosphorous from oxidation and favor its administration in the small doses required.

The Trommer Extract of Malt Company, of Fremont, Ohio, the excellence of whose productions we have already had occasion to comment upon, send us a sample in which all three of these important agents are combined. Equal parts of pure extract of Canadian barley-malt and fresh Norwegian cod-liver oil have added to them 1-100 of a grain of phosphorous to the dose (1 tablespoonful.)

This combination offers superior advantages as a remedy in a number of diseases characterized by disturbances of nutrition and innervation, and the reputation of the manufacturers is a guarantee of the care taken to furnish a reliable article—*New Remedies for January, 1878.*

THE SEVEN SPRINGS "IRON AND ALUM MASS."

The attention of the profession is called to this valuable "mineral water" preparation, an advertisement of which appears in this Journal. From the endorsements given to it, by eminent practitioners, we have no doubt of its efficacy in supplying the want of a much needed remedy for a certain class of diseases and ailments. It is highly recommended, and must impress the physician of its importance in his practice.

Durham Smoking Tobacco—goes to all parts of the world, and its sale is still increasing.

Warner & Co's. Parvules—Elegant pharmaceutical specimens of the minimum doses of medicine for children.

Reed & Carnrick—Maltine and its compounds, rapidly growing in professional and popular estimation.

Devlin & Co—This old house still leads, and retains the confidence of the public.

Trowbridge's Impervious Paper—Specimens sent on receipt of postage stamp. See advertisement.

Scott & Bowne—A complete and reliable emulsion of pure cod-liver oil with hypophosphites at last perfected.

THE PART THAT WARM WATER PLAYS IN THE COMPLETE EXPULSION OF TAPE-WORM.

The Swiss treatment of injecting warm water after the administration of teniacides, which claims to be so eminently successful, agrees somewhat with our recent experience in the treatment of tape-worm. It was pointed out in the Transactions of the North Carolina Medical Society for 1877, that successful expulsion followed the evacuation of the contents of the bowels into a vessel of hot water at stool, and upon the theory, that our recent experience confirms, we believe that the hot water or the steam keeps the worm alive, thereby rendering each "joint" tenacious enough to adhere, and drag away the others.

MILK SICKNESS.

The continuation of the article on Milk Sickness, owing to the sickness of Dr. H. G. Woodfin, must be delayed until March, as it reached us too late for this number.

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION, FOR 1877.

Notice of this volume and of the transactions of the *Virginia Medical Society* for 1877, will appear in our next issue.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, }
 SECRETARY'S OFFICE, }
 LITTLETON, N. C., January 30th, 1878. }

It is earnestly desired that members of this Society having papers to read, will announce the title in the March, April and May numbers of the NORTH CAROLINA MEDICAL JOURNAL. A full and free discussion of papers can best be accomplished by such preparation. Notice sent to the NORTH CAROLINA MEDICAL JOURNAL will be promptly attended to, as I have made this arrangement with the Editors: of course, due consideration will be given to papers not so announced. It is hoped too, that early preparation will be made to make this the fullest and best meeting of the Society. Arrangements by the Goldsborough Committee will be announced in due time.

L. J. PICÖT, M. D., Secretary.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

MILK SICKNESS—ART. 2.*

BY DR. H. G. WOODFIN, of Franklin, Macon county, N. C.

In the former number I stated that, the disease was attended with a peculiar, though not offensive odor. To me, this odor is not more offensive than the breath of a healthy person after eating strong aromatic vegetables; and as readily distinguished as that of camphor, spirits turpentine, or any familiar drug. It is frequently recognized beyond the room in which the patient is confined. The physician, of some experience, will usually recognize the disease on first observation of the patient's breath, the expression of the eye, and the singular position of the head and extremities, yet, he is not to conclude that he is ready to proceed with his treatment, until he has carefully examined the patient in regard to every important function. Every case has its own peculiarities. Each symptom taken separately may be such as he has witnessed in others; but taken as a whole, the case will differ in some respects from any

*Continued from January number.

other—and I know of no disease in which a careful diagnosis, and a minute examination of all the pathological indications is more essential, and certainly none, in which a mistake is more likely to be fatal. I can think of no disease in which a larger proportion of cases will recover under proper treatment that would otherwise prove fatal.

In this opinion, my medical friends concur, yet no hasty judgment or uncharitable remarks should be passed on those who may have been thus deceived. On the contrary, an apology may be offered, from circumstances frequently attending cases of milk sickness.

The patient may have been the subject of some other malady, or the case may have run to such a stage, and been treated in such a manner before calling in the physician, as to obscure the case in its ordinary pathological indications. These mistakes may be excusable, but not unavoidable, if every precaution is observed. I think the disease may be distinguished from any other at the last breath, even in the most prostrated cases. Hence, the necessity of close attention to those symptoms that belong exclusively to milk sickness.

To the *treatment* of this disease as it occurs in the human subject, my attention has been chiefly directed. And so far as that treatment has been successful, those of the profession, less favorably situated for observation are entitled to the benefit of it. If otherwise, and errors committed and afterwards detected, they should be stated with equal candor. If I could prescribe a specific course of treatment to be applied in all cases, as an infallible remedy where the cases are curable, the task would be quite an easy one. I have already stated that every case has its peculiarities, and must be met accordingly.

The first indications are to quiet the stomach in its frequent efforts to vomit, and move the bowels to action. These ends must be affected, but not hastily and at all hazards. Here the physician is more likely to err than at any other point, at least, such has been my misfortune, as I shall notice more particularly hereafter.

Although the vomiting is frequent and persistent, and the bowels are inactive for several days, the greatest danger is not here, nor the probabilities of inflammation such as I once supposed.

The patient may take gentle cathartics, pleasant juleps and stimulating *tonics*, just as the stomach will retain it and no faster. Cas-

tor oil answers a good purpose when it can be retained, and is generally used. Bear's oil is preferable, when it can be procured, in a pure state ; being free from taste or smell, is usually retained and acts as favorable as any other. *Diuretics* should be used at the same time, no faster, however, than the stomach will retain them. Bi-tart. pot.. spirits nitre, and some mild mucilage, will answer this purpose. Diaphoretics are highly necessary, and should be freely given as soon as they can be retained, and until then, the skin and especially the extremities should be freely rubbed with wet cloths, dipped in strong vinegar or whiskey—and, if necessary, add pepper or some other escharotic.

I have found the bi-carb. soda acts favorably in allaying thirst and the sense of burning in the cardiac region. In the commencement, if the patient makes frequent efforts to vomit without success, I favor the indications, or, rather the efforts of nature, by a gentle dose of ipecac and warm water. Brandy and honey have been used as a popular remedy for many years, and to some extent, to the present day. This treatment when cautiously observed, may have caused some persons to recover who otherwise would have died ; and probably a greater number to die that might have recovered without medical treatment.

That brandy is a specific, or an antidote to the poison, is certainly preposterous. Yet, I use spirits of some kind more freely in this than any other form of disease, when the patient receives it kindly. With it, I use tonics, such as gentian, columba and cinchona, usually in the form of tincture. Occasionally I make the juleps as pleasant to the taste as possible, and as recovery advances, the tincture should be strengthened with tonics. Convalescence is not marked by any certain crisis—yet, not unfrequently the vomiting ceases, the bowels act, the perturbations of the heart diminish, and the extremities become warmer almost simultaneously ; the patient takes a longer sleep than usual, and gentle perspiration may be discovered ; and he wakes up unconscious of any suffering—would attempt to rise from his bed if not restrained, being insensible of his weakness. These, or similar favorable indications may recur at uncertain intervals, several times before convalescence is decidedly established—or recovery may proceed from the first favorable symptoms. Danger of a recurrence of the disease, after recovery has fairly commenced, is imminent, from the fact that the disease *incu-*

bates, and may be renewed at any time before complete recovery. Yet this has not been the case with any patient under my immediate care.

Recovery may commence within twenty-four hours after the treatment has been commenced ; usually within 3 or 4 days, and it is completed in 10 or 12 days, sometimes much sooner. If the treatment has been long neglected, recovery may not be expected so soon. When death takes place it is usually in 8 or 10 days after the attack. The attack will usually occur in a week or ten days after using the milk and butter ; may take place in twenty-four hours, or may be delayed for several weeks, or even months. This is so dependent on circumstances, such as violent exercise, that uniformity as to time cannot be determined.

Persons who have once suffered with this disease are more liable to subsequent attacks than others. That those who have suffered severely from this disease feel the effects of it ever after, is certainly without foundation. Where the contrast between *life* and *death* has been a close and doubtful one for several weeks without appropriate remedies, and a strong constitution prevailed, at the expense of a shattered nervous system, the muscular power reduced to its minimum, and the capsular ligaments of the joints so contracted, as barely to admit of motion, I cannot say what would be his condition in after life.

When patients have been properly treated, no trace or symptom of the disease is ever felt after recovery.

What proportion of cases fairly treated will ordinarily recover ?

If the treatment is commenced soon after the disease is clearly developed, I answer almost *one hundred per cent.* Perhaps in disease of a dangerous tendency, yields more certainly to proper treatment, although it may not yield so readily as some others. This I say, not boastingly, nor by way of disparagement to those who may not have been quite so successful ; but for the encouragement of sufferers, and to inspire confidence in the young practitioner ; that he need not despair of success because of unfavorable indications, or unsatisfactory results in his first efforts.

That my experience in this disease has not been confined to narrow limits to a few years, or a small number of cases is well known in this part of the State. And I can confidently say in the course of 43 years, I have witnessed the death of less than a half dozen

cases, and all of them, save one, in a hopeless condition before I saw them.

The facts of this one case should be candidly stated, inasmuch as it proved fatal under a hasty treatment, and a misapprehension of the chief sources of danger.

The case was that of Miss Morrow, a large, corpulent young woman of about 20 years, in the summer of 1836, the first case in second year of my experience of this disease. The disease was contracted some twenty-five miles away and her strength much exhausted on reaching home. She suffered some five days or more, before my arrival, with nausea and frequent vomiting, for a few minutes before each emesis, would appear deathly sick, her bowels unmoved during that time, with cold extremities and other symptoms usually attending such cases.

I determined to move the bowels as speedily as possible, and to that end used the most active cathartics that could be retained and as soon as one dose would be ejected it was followed by another. After 30 hours or more I succeeded in that purpose, but her vital energies were exhausted, she never rallied and died of anæmia on the third day after my arrival.

The mistake here consisted in supposing the alimentary canal to be the chief seat of danger, and *that* through which remedies were to be conveyed to other parts of the system.

In reality there is no appearance of enteritis, and little danger of additional accumulation, as the excretions are well nigh suspended; nor should we overlook the fact that constipation, under such circumstances, is more easily overcome and the peristaltic action renewed by stimulating tonics, than by drastic cathartics. And what was still more to be regretted, the indications of danger that now impress me most forcibly should then have been neglected until it was *too late*. The skin is dry and almost bronzed, the extremities flexed and cold, the capillary circulation imperceptible, secretion and alimentation well nigh suspended, the sources of animal heat dried up, the pulsation of the large arteries may be seen in the motion of the bed covers, and every systole of the heart proclaims that the citadel of life is invaded, and that we should not trifle with the remaining sparks of vitality by any debilitating course of treatment. The strength of the patient must be cured, for at every stage and throughout the whole course of the disease; otherwise if the patient recovers, he does so in spite of improper treatment.

These pages have been written from memory, and with no private ends in view. The chief object has been to aid others, especially the young or strange physician in meeting responsibilities he may be called on to assume where no assistance or counsel may be at his command.

For any want of systematic arrangement or perspicuity of style, I have no apologies.

I have thought the history, pathology and treatment of *Milk Sickness*, of sufficient magnitude to engage the attention of the profession even if the remote cause should remain as it now does, in obscurity.

I have nothing new to offer as to its *pathogenesis*, and must be excused for expressing an opinion without any facts to sustain it.

The theories that have been offered, and the discoveries supposed to have been made are pertinent to the subject, whether containing any practical suggestions or otherwise.

1. Mineral poisons, mineral waters and mineral exhalations from the earth, have been supposed to cause the disease. These scarcely need be noticed, as their effects are so direct and uniform, and so far different from this disease as to deceive no careful observer.

2. Vegetable poisons are supposed by many to be the cause. This may be true of some unknown substance belonging to the vegetable kingdom, but those claimed as such are as far from the mark as the mineral poisons, but as they are advocated by men of science and experience, they are entitled to a respectful consideration.

The *eupatorium* has been confidently affirmed to be the cause.

This plant is said to abound in all parts of the United States, and certainly grows abundantly where this disease has never been known or suspected.

The *Rhus-toxicodendron* has been placed before the public more than once, by professional men claiming some experience in this disease. Now all our citizens are familiar with the *poison oak*, as it is seen in all sections of this country, however remote from the localities infected, with milk-sick-poison, and they shun it as a deadly poison, the touch only being sufficient to produce cutaneous disease resembling erysipelas.

Doubtless these, as well as many other shrubs will poison animals that eat them. But all poison is not milk sickness. They are di-

rect and certain in their action, and the flesh of the animal so poisoned does not produce disease in others that eat the carcasses.

3. It has been observed that its effects closely resemble the phenomena produced by *animal poison*. And also that it may be produced by organized diseased germs or microscopic fungi.

There may be some plausibility in this hypothesis; but on the supposition that the disease has an animalcular origin I should not know how to reconcile that with the well established fact of its confinement to certain localities, immediately outside of which there is no danger.

That the microscope and chemical appliances may be brought to bear upon this investigation, and that by diligent search and close observation this mysterious substance that causes milk sickness in cattle may be discovered, is not altogether improbable and is certainly desirable.

If the substance should be discovered, and in sufficient quantity to cause animals to take it, the test can easily be made, without the aid of science or chemical analysis—two facts, however, must clearly concur.

1. It will sicken and kill a portion of the animals, while others taking the same quantity remain healthy.

2. That the flesh of those that die will kill the dogs that eat it.

Or if it be given to milk cows and some of them remain unhurt while the calves and dogs using the milk sicken and die, the test would be conclusive.

It is said that the milk as it is drawn from the cow does not foam—and I should have inquired further into the *peculiarity*, but the same was affirmed of the milk of cows that eat mushrooms, and hence it was not a peculiarity and would prove nothing. I should very much like to see the discovery made—and will cheerfully aid the younger members of the profession in their effort in that direction.

The field is still open. The lands that contain it in any of these counties are not in cultivation, nor likely to be for generations to come, and although the number of cases occurring in the last seven years, as compared with seven years, 30 or 40 years ago, is in a ratio not greater than one to five, they are sufficiently numerous for practical purposes.

If any one is curious to know why, with my long and familiar acquaintance with this disease, as presented in the human subject,

I have made so little enquiry into its etiology—if he will inquire into the surroundings he will ascertain that my responsibilities in other directions were quite enough for my capacity.

COLICA PICTONUM.

BY ROBERT L. PAYNE, M. D., Lexington, N. C., President of
the Medical Society of North Carolina.

Ever since I began the practice of medicine in Davidson County, I have at various times, and in numerous localities met with a disease which I have regarded as Lead Colic, but which some of the fraternity believed to be “liver disease,” or some *new thing* without a name.

The disease has not been confined to any special localities; in truth, I have seen it as frequently in highly malarious sections of country, as upon the most elevated ridges.

It occurs generally sporadically, sometimes endemically, but I have never seen it as an epidemic.

It occurs too, at all seasons of the year, and does not seem to be at all affected by atmospheric changes.

The prodromic symptoms of this disease as it has occurred in my practice, are general lassitude, anorexia, pain in the back and limbs, and a very decided tendency to constipation.

In many cases the constipation is obstinate from the outset. In some, the tongue is slightly furred, in others, not at all. Pain in the abdomen is present in every case, and is located in the region of the navel, and although slight at first, soon becomes so intense as to make the poor sufferer writhe with agony. Soon the patient becomes emaciated, and complains of great muscular debility. His features are shrunk and sharp, and of a peculiar dead, tawny, or dusky hue. The pain when most severe, extends from the umbilicus up into the epigastric and hypochondriac regions, and downward into the hypogastric and iliac regions, and sometimes even into the genital organs.

The abdomen is flat and hard, and very frequently retracted.

Nausea, and sometimes vomiting are present in the majority of cases.

The evacuation from the bowels are hard, dry, and scybalous.

Nearly all of them complain of great weakness in the arms, and in several cases paralysis of the extensors was well developed.

Four-fifths of these cases have a blue or grayish line along the gums, which line is absent where a tooth has been extracted.

There is no fever at the outset, but in the more obstinate cases it is developed after two or three weeks's illness.

It is more commonly present in those cases that have been too long neglected.

I have never been able to find lead in the excretions, nevertheless, I feel confident that the disease can be nothing else but true painter's colic.

My friend, Dr. Henry T. Bahunson, of Salem, N. C., read a very excellent article before the Medical Society of North Carolina, at Fayetteville,* in which he speaks of a disease "known among the common people" as "Liver Disease," and which I believe to be the same disease I have above described, although, some of the symptoms met with in my cases, were not present in those he treated. He mentions the peculiar cadaverous expression, the want of appetite, the tendency to constipation, the general malaise, the pain about the umbilicus, the retracted abdomen, and the blue line along the gums; but did not observe paralysis of the extensors, or scybalous discharges in his cases.

Now, then, with the symptoms which he has detailed in his paper, and which I have endeavored to give faithfully above, can the disease possibly be liver disease? Can it be anything else but lead colic?

The question may be asked, why can you not detect lead in the excretions? To this, I can give no answer, unless it be that our tests are not sufficiently accurate, or were not expertly employed.

Again, another question may be put, to-wit: How is the poison introduced into the system? This last, I believe, can be satisfactorily answered.

Our German population consume large quantities of milk, stewed fruit, and various kinds of pies.

*Transactions for 1876.

The milk is kept in earthenware "crock," the fruit is very slowly stewed in earthenware vessels, the pies are baked in earthenware dishes, and these vessels are often glazed with lead, or lead enters into their composition. This, I believe, to be the true source of this disease, because no case has fallen into my hands in those families where such vessels are not used, except a few cases among those who work in lead.

But there are other sources from which lead might come, for instance, the miserable paper curtains, painted furniture, etc.. etc. Prof. Flint, says: "Some years ago, a large number of persons within a limited district in Ohio, were affected with a disease, which, for some time, was regarded as a novel epidemic, (like ours?) and received the name of dry cholera. It was found out to have the diagnostic characters of lead colic, and was traced to the common use of a cheap kind of earthenware made in that vicinity, into the glazing of which lead entered."

But if we could find no source for the lead, and still had cases with the above symptoms, could we make anything else of it but lead colic?

It really seems to me that the retracted belly, the pain about the umbilicus, and the blue line along the edges of the gums, are sufficient in themselves to establish the diagnosis!

Now, then, let me adduce a little evidence regarding this blue line:

It is true, that Taylor in his Medical Jurisprudence, tells us that a blue line along the gums may be caused by other poisons, but he adds: "It has, however, been so frequently observed, that most pathologists now regard it as a well-marked pathognomonic symptom," of lead poisoning, and all the other authorities with which I am familiar regard it as characteristic.

Eberle mentions this characteristic line.

Watson in his lectures says: "Very recently a most curious symptom, pathognomonic, I believe, of the presence of lead in the system, has been pointed out by Dr. Burton, and now that it has been pointed out, one can hardly understand how it escaped discovery so long."

The venerable Dr. Edwin A. Anderson, of Wilmington, N. C., whose learning and skill as a diagnostician entitle him to more than a great local reputation, reported in the *American Journal of Medical Sciences*, some cases of lead poisoning which were very

characteristic. The diagnosis was very clearly made out, and the blue line was carefully described. These cases were caused by drinking water carried across and under the Northeast Cape Fear River to a saw-mill on Point Peter opposite Wilmington, in lead pipes.

Wood says : "As first noticed by Dr. Burton, the gums present especially at their margin, a pale, bluish, gray color, characteristic of the action of lead upon the system."

Dickson informs us that, "The retraction of the muscles of the abdomen and the blue line along the gums * * * * * are considered characteristic."

Hartshorne says : "There is a blue line along the edge of the gums."

Flint says : "A valuable sign was indicated by Tanquerel in his treatise on Lead Diseases. * * * * * This sign consists in a blue or slate discoloration of the gums at their junction with the teeth."

Tanner says : "The existence of a blue, or slate-gray line around the edges of the gums is a pathognomonic symptom of the presence of lead in the system."

Niemeyer states that, "The gums are dark, almost slate-gray," in poisoning from lead. Thus, I might go on, adducing testimony on this point from numerous other recognized authorities but I deem this sufficient.

I have not the least shadow of a shade of a doubt that the disease, as I have met it in my county, and which I have endeavored to describe, is nothing more nor less than old-fashioned lead colic.

There is nothing *new* about it, in fact, it is almost "as old as the hills."

Believing it to be lead colic, I have treated it as such, and every one of my patients have recovered, without an exception, either young or old.

The treatment which was pursued in my cases was substantially the following : Opium in full doses, by the mouth, or morphia hypodermically was given to control pain, and repeated as often as there was a demand for it.

Active cathartics, sometimes the compound cathartic pill, and in other cases, a pill of calomel, jalap, aloes, colocynth and croton oil were given to keep the bowels open, and were followed whenever necessary, by epsom salts, most often, but sometimes by castor oil,

The bowels were more readily moved after the patients were brought under the influence of opium.

Stimulating injections, anodyne injections, and simple warm water injections were resorted to as the cases seemed to require. Benefit was derived in a few instances from the gall of a beef, dissolved in warm water and given by enema. In some cases, the elixir of vitriol was used with good effects, in others, large doses of alum proved serviceable, and in others, again, the iodide of potassium seemed to be decidedly beneficial, in truth, the last named remedy was administered more generally than any other, except opium, and I believe, was of material service in eliminating the poison.

The warm water bath, the acidulated bath, as well as frequent sponging of the surface of the body, were resorted to in many cases, and afforded great comfort to the patient, if nothing more was accomplished thereby.

Large warm poultices applied over the whole abdomen appeared to alleviate pain in many instances.

I allowed them all, the free use of acidulated drinks, and as much nutritious food, of the more digestible kinds, as they were disposed to take.

Stimulants, and tonics were given in many of the cases throughout the attack, and during convalescence, and for some time after, iron, quinine, and bark, or gentian, together with brandy or whiskey, were given to build up and fortify the system.

THE EFFECTS OF THE INTERNAL ADMINISTRATION OF QUININE UPON THE EAR.

By D. B. ST. JOHN ROOSA, M. D., of New York.

For a long time there has been a belief among the laity, a belief that is shunned by some medical men, that the internal use of quinine sometimes seriously and permanently injures the power of hearing. It cannot be said, however, that this belief is an established fact. Indeed, it is still, I think, an open question, whether the internal use of quinine ever permanently injures the ear. I

am free to say at the outset, that my conviction is, that the evidence leans that way, but I do not consider that we are able, as yet, to decide the question.

It is with a view of collecting testimony on this point, that I address this communication to my medical brethren of the Southern States. The medical men of the South have, perhaps, as good opportunities as any observers in the world for settling this question, for, as I am told, the malarial fevers of that region often require doses of quinine that are seldom or never given in the Northern States. I will first give a sketch of what is known of the effects of quinine upon the ear, and then submit a simple plan for observations on this subject.

In 1870* I saw a case of impacted cerumen and inflammation of the external and middle ear in a medical man, when the use of quinine seemed to be the exciting cause of the inflammatory trouble. The evidence that quinine in this case was a cause of inflammatory disease of the ear, has always seemed tolerably strong to me. I may refer the reader to page 155 of my text book, for a full account of this case.

Dr. C. E. Hackley, Physician to the New York Hospital, gave me a verbal report of cases of aural inflammation, occurring in his practice at the Hospital, which seemed to be the result of the internal administration of quinine.

I have been obliged to reject all the testimony I have yet gathered from patients suffering from chronic aural disease, as to the influence of quinine in producing *permanent* trouble, as worthless; of course, no one denies that a temporary tinnitus and impairment of hearing, are almost constant results from the use of the drug in question.

My friend, Dr. C. Duffy,† of Newbern, N. C., also came to a negative conclusion after some exact observations on this point. All that I can state after years of careful consideration as to whether quinine does or does not permanently injure the hearing power in some cases, is, that I believe that the hyperæmia, of the auditory apparatus which experiment has shown us, is often caused by the administration of quinine, is dangerous to the ear that is already in a state of congestion.

*Transactions of the American Otological Society, 1872, p. 57.

†American Journal Medical Sciences, p. 88, October, 1874.

I have no positive opinion on the question, as to whether ears previously healthy may be permanently injured by cinchonism.

The experiments that have, as I think, established the fact, that the internal use of quinine does often produce hyperæmia of the ear, were made by Professor William A. Hammond and myself.

Dr. Hammond's experiments made upon dogs, may be found in the Psychological and Medico Legal Journal, for October, 1874.

My own experiments consisted in the administration of the sulphate of quinine in ten and fifteen grain doses to male adults, and in the examination of the drum heads when the subjective effects of the drug were observed.

Hyperæmia of the membrana tympani was seen in all the cases but one; and in one case there was also hyperæmia of the auricles, and of the ocular conjunctivæ. There were five observations, and in one case no effect whatever was detected. This subject was anæmic, and accustomed to take quinine, while the others were not.*

The hyperæmia and tinnitus in those five cases were but temporary. Having thus cleared the way for the object of my inquiry, I beg my readers to assist me in further investigations upon this subject.

As a preliminary to all investigation in this department, the investigator must know how to examine and recognize the details of the membrana tympani. With a good otoscope—to be obtained of instrument makers for about \$2 50, and a set of aural specula any intelligent practitioner, not already in possession of this skill, may be able to examine a drum-head in a very few trials. In case of need, any mirror or bit of one, may be used as a reflector, while all the skill required is to place the speculum gently and firmly on the auditory canal, and while holding it in position to throw the light from a white wall, a clear or cloudless sky, a lighted candle or lamp, or gas burner *into* the canal, and *upon* the drum-head. The observations should be made upon persons whose hearing on each side has been accurately tested by the watch and conversation. If there is any impairment of hearing on either side, the subject should be rejected as not a proper one for the tests. If there is a history of previously existing loss of hearing power, this I think, should also exclude the case. The drum-heads should be examined and their appearance, especially as to hyperæmia carefully recorded.

*Transactions American Otological Society, 1875.

During the administration of the quinine, the hearing power should often be noticed and the drum-heads examined. Then in 10, 30, and, if possible, 60 and 90 days after the use of quinine has been given up, the hearing power, the appearance of the drum-heads, the subjective symptoms, should be carefully noted and inquired into and recorded, of course, it is assumed that these observations will be made upon patients for whom it is necessary to prescribe quinine for the relief or cure of disease, and not upon physiological subjects. A hundred such observations, made by different observers, will go a part, if not all the way, toward settling the question as to whether quinine administered internally, does permanently impair the hearing and cause lasting subjective sensations referred to the ear. The writer will thankfully acknowledge any exact information bearing upon this subject.

CLINICAL REPORTS.

GUN-SHOT WOUND OF THE COCCYX, PERFORATING THE RECTUM.

By W. J. H. BELLAMY, M. D., Wilmington, N. C.

Gun-shot wounds and fractures of the coccyx being uncommon, and in fact, rare, I am induced to report the following case, occurring in this city on last Christmas morning.

T. W., aged thirteen years was shot, by a neighbor accidentally, the gun having been loaded, as was stated, with powder and paper wadding only, but tightly rammed in the barrel. The distance was but seven or eight feet. The load entered the coccyx near the sacro-coccygeal articulation, a little to the right of the mesial line, and passed on through the walls of the rectum. The size of the wound was at least, that of a circle whose diameter is two and a half inches. I saw him shortly after the occurrence, and with my index finger thoroughly examined the wound.

Fragments of bone still retained in their nearly normal situation by their ligamentous attachments were easily felt, and as the finger

was withdrawn, bubbles of the peculiar flatus from the rectum escaped, as was evinced not only by their appearance but by the peculiar odor. Carbolic acid and whiskey were applied as a dressing to the wound. Paregoric for the relief of pain to be given *pro re nata*, a dose of castor oil was prescribed to be given next morning.

December 26th. Patient is restless, and suffering with pain and uneasiness in the hypogastric region, worse during the act of micturition—bowels have moved freely—fæces are seen oozing through the wound. The patient lays upon his abdomen and complains of the position being tiresome. Prescribed flax seed tea and nitre, with flannels wrung out of tea made with hops and vinegar to be applied to hypo-gastrium. Paregoric in anodyne doses and carbolic acid and whiskey dressing continued, and great cleanliness enjoined.

Day by day, during the progress of healing by healthy granulations, there could be seen feculent matter, with its characteristic odor, oozing through the wound. Treatment similar to that mentioned was continued, and on the 10th of this month (February) complete and firm cicatrization of the wound throughout its whole extent had taken place. The patient has daily alvine evacuations and urinates without any difficulty, says he feels as well as he ever did.

From the "Medical and Surgical History of the War," from the Surgeon General's office, Washington, we observe that there were seventeen cases reported, six or 35.3 per cent. were fatal. In twelve with five deaths, the coccyx was the only bone involved. In four of the seventeen cases, the rectum was penetrated. In three of these four cases, the bladder was also injured."

Andouillé (Mém de l'Acad. de Chir.) states, that in Flanders, at the battle of Rancon, a Hanoverian soldier was struck by a musket ball, which entered at the junction of the pubis with the ilium, traversed obliquely the cavity of the pelvis, perforated the rectum, and destroyed the lower part of the sacrum and part of the coccyx. These are the only well authenticated cases reported that I am aware of. In the case I have reported, I certainly did not expect such favorable results in comparatively so short a time. I had apprehensions lest I would be troubled with a tedious fistula. In such cases very good results may be expected from the use of a rectal tube to convey liquid forces and to prevent accumulations in the rectum.

A CASE OF HOUR-GLASS CONTRACTION OF THE UTERUS BEFORE THE EXPULSION OF THE FŒTUS.

By A. H. GOELET, M. D., New York.

On the 24th of July last, I was called to Mrs. R., who had engaged me to attend her in her third confinement, which she expected about the last of September. She was consequently about 6½ months advanced. I found her in premature labor, the os fully dilated, and the membranes still intact, but could detect no presenting part. The pains being very feeble and infrequent, 25 gtt. Squibb's fluid extract of ergot was given. As the pains increased there was some hemorrhage, and I ruptured the membranes to expedite the labor. An enormous quantity of amniotic fluid was discharged. Another examination at this time found the os in the same condition as before, and it was not until the whole hand was introduced into the vagina that the uterus was discovered to be contracted in the centre, the fœtus above the constriction, and a finger projecting through. This was a condition I never met with before, and I was in some doubt at first as to the proper course to pursue. But, since the patient was in danger from the hemorrhage which still continued, the indication was clearly the immediate extraction of the contents of the uterus. With great difficulty one finger was forced through the constriction, then another, and after considerable search a foot was found, but having only two fingers with which to grasp it, very little traction could be used. Finally, one foot (for the other could not be found) was dragged down and out of the vulva, but when the breech of the child presented against the constriction it required all the force that could be exerted with both hands, to bring it through, and the same was the case as the shoulders and head came down in succession. The delivery of the placenta, though less difficult, required force.

So far, as I am informed, this is the first case of the kind on record. But if this report should meet the eyes of any one who has seen or heard of any such condition before, I should be pleased to hear from him through this Journal.

SELECTED PAPERS.

FOREIGN BODIES IN THE ŒSOPHAGUS.

The following is the substance of a paper read by Professor B. von Langenbeck, to the Berlin Medical Society on "Foreign Bodies in the Œsophagus and Œsophagotomy." After indicating the usual places where foreign bodies are detained in the œsophagus, the Professor went on to say (*Berliner Klin. Woch.*, December 17 and 24) that he had met with three cases in which voluminous bodies detained in the pharynx by compressing the epiglottis against the rima glottidis threatened to produce immediate suffocation. The first of these was produced in the lecturer's presence, by a boy playing with another at catching a small apple thrown into his mouth. After succeeding several times, he suddenly fell on the floor with widely-opened mouth and a blue-colored face. Fortunately, it was found that the apple could be extracted by introducing the fore-finger beside it. The second case occurred in the person of a very robust gentleman, who came to consult the lecturer concerning a hernia. Lying down on the sofa in order that it might be examined he suddenly became lifeless and blue in the face. On the fore-finger being introduced, a complete set of false teeth was withdrawn, the pulse and respiration, however, not returning until some seconds afterwards. Dieffenbach relates an entirely similar case. In the third instance, a lady, about to undergo amputation of the breast, exhibited at the very commencement of the administration of chloroform laborious stertorous breathing and a dark blue-color of the face. The finger introduced to draw the tongue forwards, detected and withdrew a set of false teeth. In other cases of this kind the patients do not always escape so easily; and it is very desirable that dentists should caution those to whom they supply teeth in order to prevent these accidents. Surgeons, too, before administering chloroform to elderly people, should ascertain with certainty the existence of false teeth, and insist upon their removal. In the removal of large foreign bodies the finger is the instrument to be resorted to before all others; and if they are too firmly fixed to be removed by it, then forceps or levers should be used. Tracheotomy is always too late in such cases. When, also, small-pointed foreign

bodies—as needles, fish-bones, etc.—are detained in the pharynx, and especially in the sacculi formed by the ligamenta glosso-epiglottica, the finger should never be omitted to be introduced, in the hope of bringing the body into the mouth, or at all events to ascertain its exact position before employing the forceps.

When a foreign body of some size, as a large piece of meat, hard dumpling, potato, etc., passes through the pharynx, it not infrequently becomes detained in the œsophagus opposite the cricoid cartilage, and by pressure on the larynx or trachea causes great difficulty of respiration. Its position is easily ascertained by the projection it causes on the left side of the throat, but its removal is often very troublesome owing to the spasmodic contraction of the œsophagus which takes place above and below the foreign body. Forcibly thrusting it down cannot be too strongly deprecated, as injury to the œsophagus cannot be avoided with certainty. A peasant applied to the lecturer for relief, having thirty hours before, attempted to swallow a huge piece of sinewy meat, which, being retained, almost induced suffocation. Repeated attempts were made to remove the foreign body by means of a slightly curved, strong forceps, but it proved immovable, only some of the fleshy fibres coming away. (Esophagotomy was contemplated, as during the attempts at removal the difficulty of respiration was so greatly increased ; but the projecting tumor having been seized by the fingers in the neck, raised from the larynx and compressed for some minutes, the respiration became much more free. The foreign body, although not moving from the spot, had assumed through this manipulation, a more elongated form, and was removed by means of the forceps with some exertion of force. Another man applied on account of the obstruction to respiration and swallowing caused by a pretty large piece of tough meat which had for twenty-four hours obstructed the same part of the œsophagus. Violent retching, caused by tickling the fauces and attempts with the forceps to withdraw or thrust it down, failed to dislodge the body, which was placed as in a diverticulum of the left side of the œsophagus. The tumor which it formed in the neck was then seized with the fingers and squeezed so powerfully that the body slid down into the stomach. Dupuytren dealt with a potato in the same way, which had resisted all attempts to withdraw it or force it into the stomach,

When the position of the foreign body is not indicated by its projection in the neck, we must bear in mind that the indications furnished by the patients themselves are very deceptive. Oftentimes they are unable to denote its locality, and sometimes assign one that is far distant from the real one. Thus, a woman in whom a set a teeth was lodged opposite the cricoid indicated the cardia, and a man referred the obstruction caused by a piece of bone to the cervical portion of the œsophagus, when it really existed in the thoracic portion. Catheterism of the œsophagus may therefore be required to ascertain the situation of the body. The general and almost traditional practice of employing the probang, either for the withdrawal or for the thrusting down of the foreign body, cannot be too earnestly deprecated. A more irrational practice can scarcely be imagined, and no other instrument has done so much mischief in proportion to the number of cases in which it has been employed. By it we are able to ascertain neither the situation nor the condition of the foreign body ; and, in place of its withdrawal or propulsion, it sometimes becomes only forced deeper into the œsophagus, and even (as in two cases which the lecturer has met with) be thrust through the wall of the œsophagus into the mediastinum. When soft bodies obstruct the œsophagus, the forcing of which into the stomach is desirable, the probang may be used ; but in all cases when the condition and position of these are unknown, or their extraction seems possible, catheterism must first be performed. For this purpose Professor von Langenbeck uses a whalebone staff, to the lower end of which is attached a smooth polished iron ball. This, when well oiled, slides readily down the œsophagus by its own weight, is easily movable to and fro, and enables us to detect with certainty hard bodies, such as coins, needles, and pieces of bone. If the object is to force into the stomach a harmless substance, the nature of which is known, he employs an elastic œsophageal sound ; this acts upon the foreign body as efficaciously as the probang, but slides down the œsophagus far more easily, and renders injury much less possible. Foreign bodies which may wound the œsophagus, or become dangerous in the intestinal canal—such as bone, fragments of glass, coins, needles, etc.,—should, in Professor von Langenbeck's opinion, be always extracted, their extraction being a far more certain and less dangerous procedure than forcing them into the stomach. In a great number of such operations he has never

met with any accident. The instrument which he exclusively employs for this purpose is Von Græfe's coin-extractor. This passes with facility, and without any injury, into the œsophagus beside the foreign body, and during its withdrawal seizes it with a certainty that leaves nothing to be desired. Prior to its introduction, some oil should be introduced into the œsophagus, and then the end of the instrument should be guided by the left forefinger over the roof of the tongue and epiglottis against the back of the pharynx, and thence into the tube. On withdrawing it very carefully, if the least resistance is encountered we must desist, and move it gently to and fro in order to disengage it from any possible entanglement in the mucous membrane. When the instrument with the foreign body has arrived opposite the cricoid cartilage, difficulty in completing the extraction is caused by the cartilage springing backwards; but this may be obviated by pressing the end of the instrument, which has now become visible, against the posterior wall of the pharynx. When the isthmus faucium has been reached, we should always, and especially with restless children, have the left forefinger in readiness, in order to seize hold of the foreign body, which might otherwise escape. A pair of firmly grasping pharyngeal forceps, and this coin-extractor, constitute all the apparatus required. There is, however, one inconvenience attending the coin-extractor that must be noticed—viz : when the foreign body becomes so firmly wedged into the extractor that this cannot be loosened from it and withdrawn. Professor Adelman relates a case in which the extractor, thus embracing the foreign body, could not be removed during two days. In the case of a girl who had swallowed a shawl-pin, which occurred to the lecturer, its position at the lower end of the œsophagus having been detected by means of the sound armed with the iron knob, it was seized by the coin-extractor. So firmly, however, had it penetrated the œsophagus that it could not be withdrawn ; and, after repeated efforts, when the attempt was abandoned, the instrument could not be separated from the pin until after half an hour, when the pin slipped into the stomach. Bloody stools followed, and the patient complained of great pain in the stomach for a month after the accident, but the pin has never been found.

Casting one's eye over the statistics, it would be concluded that the passage of foreign bodies into the œsophagus, is a very danger-

ous occurrence ; for of the 314 cases collected by Adelman, 100 proved fatal. But the proportion of fatal cases is far less than this, for the great majority of cases, when the foreign body is easily extracted or passes into the stomach, are never published at all. In Professor Langenbeck's thirty-four years' practice he has had a very great number of these cases, and has never met with a fatal occurrence. Pieces of money can always be removed, and some of the pieces of bone slip into the stomach as soon as they have been dislodged by the extractor ; but the great majority of flat and pointed pieces of bone are removed. In the two fatal cases of perforation of the œsophagus related by Professor Busch, the sponge-probang had been employed, and the foreign body could not be detected. However, from this statistic the conclusion is to be drawn that if the foreign bodies be not promptly removed, and if unsuitable and violent manipulations are employed, they may seriously endanger life. Above all things, it is important that the body be removed as soon as possible, and that the practitioner at once proceeds with decision.

When the removal cannot be accomplished, and the nature of the body does not admit of its being thrust into the stomach, when the cervical œsophagus is the part of the tube concerned, we should perform œsophagotomy. It is a comparatively rare operation, for, according to König, from the time of its first performance by Goursault in 1738 to 1872, it has only been executed twenty-six times for the removal of foreign bodies. Its indication has been generally believed only rarely to occur, while its danger and difficulty have been exaggerated ; and an examination of recorded cases of foreign bodies in the œsophagus shows that it should have been performed much more frequently, and that, without doubt, many lives might have been saved by it. The twenty-six operations referred to by König, and two now related by the lecturer, were followed by twenty-three recoveries and five deaths, some of the latter being due to the too prolonged residence of the body ; so that the operation must be regarded as one attended with very little danger. Almost all living surgeons agree that the mode of making the incisions recommended by Guattani is the best, the skin on the left side of the neck being divided from the middle of the thyroid cartilage to the anterior edge of the sterno-cleido-mastoid, and to about five centimetres above the manubrium sterni. After the superficial fascia

has been divided, the sterno-cleido is drawn outwards and backwards by means of double hooks, and the common carotid then becomes visible through the middle cervical fascia. The fascia is to be divided in the direction of the long axis of the wound, and drawn outwards and backwards by means of strong hooks, the carotid being kept out of the operation-field. It must not be forgotten that this artery lies more superficially than the œsophagus, and that the latter only becomes visible after the deep cervical fascia has been divided. This is done at the outer edge of the sterno-thyroid muscle, after having drawn the larynx by means of a hook to the right side. The muscle being now drawn towards the median line, the œsophagus becomes visible. Before opening it an œsophageal sound, made of gum-elastic or pliable metal, should be introduced for the purpose of projecting the œsophagus more to the left, and rendering its opening more easy and certain. The separation of the fascia in order to expose the œsophagus is best accomplished by raising it by means of two hook-forceps and dividing it between them, allowing the knife to act more by its pressure, thus avoiding injury to the inferior thyroid artery and inferior laryngeal nerve. Injury to the recurrent nerve is not much to be feared, as this passes upwards between the trachea and œsophagus, and is with the former organ drawn towards the right ; it is only in question when a foreign body of large circumference thrusts the œsophagus far towards the left. The nearer an operation approaches important organs, the more must it assume the character of a delicate anatomical dissection ; and in order to avoid injuring important vessels, it is highly desirable to separate the tissues as much as possible by means of the fingers or blunt instruments. When the foreign body does not project the œsophagus, and cannot be felt externally, the passage of an œsophageal sound by the mouth very much facilitates the operation. One circumstance may render the access to the œsophagus exceedingly difficult, and is of the more importance, inasmuch as it is not noticed in any of the descriptions of the operation. This is the tumefaction of the thyroid gland. If a large foreign body be detained for several days opposite the cricoid cartilage, causing difficulty of respiration by pressure on the larynx, swelling of the thyroid due to a stasis of the blood in the veins is always present. The tumefied gland lies so much over the œsophagus that this may be entirely covered by it ; and in order that the gland may

be raised from the œsophagus its enveloping fascia must be divided.

Professor von Langenbeck terminates his communication by the narration of two cases in which he performed œsophagotomy with success for the removal of false teeth.—*Medical Times and Gazette*.

IMPORTANCE OF THE ARREST OF EPILEPTIC AURA— MEANS FOR PREVENTING ATTACKS OF EPILEPSY.

BY C. E. BROWN SÉQUARD, M. D.

*Abstract of a Lecture delivered at Bellevue Hospital Medical College,
December 15, 1877.*

I pass now to another point. I said yesterday that there is very frequently an *aura* in disease of the brain causing convulsions. It is very important indeed to examine with reference to this point; for if you find an *aura*, it will lead to the use of a series of means which may stop an attack of epilepsy. If an attack of epilepsy can be arrested, we do more than simply arrest that attack; for during an attack of epilepsy, changes occur which prepare the brain for future attacks; so, if one attack can be arrested, you may, perhaps, stop a generation of attacks. It is important, therefore, to prevent an attack of epilepsy. Now, with reference to the means of preventing these attacks. Means for preventing the occurrence of attacks of epilepsy were resorted to centuries and centuries ago. Galen insisted particularly upon the importance of ligaturing the limbs for this purpose. Suppose, for instance, there is an *aura* starting from the finger—a peculiar sensation or muscular spasm; Galen, and a great many physicians since his day, and even in our times, insisted upon the application of a ligature to the arm, with a view of preventing the passage of some influence from the extremity to the brain. In reality, we succeed very frequently, by the application of a ligature to the extremity, when the *aura* is there, in arresting an epileptic attack; but it is not because we prevent something from going to the brain, but it is because we send something to the brain, and that something is an irritation which acts so as to arrest the irritation already there, and which, if undisturbed, would

produce the convulsion. It is the same as that which occurs in diseases of the spinal cord, in which, by taking hold of the big toe, you arrest completely, in most cases at least, convulsions occurring in the lower limbs. For example, in cases of spinal epilepsy, the convulsions may be most violent, may last all day, and may recur upon the least touch of any part of the skin of the lower extremities ; in those cases it is not rare at all, especially in certain forms of the disease, that drawing upon the big toe brings about a relaxation of the muscles and ends the convulsions. An arrest of the morbid activity in the cells in the spinal cord is produced by irritation of the nerves which go to the big toe, and that arrest remains sometimes for hours, and sometimes for days ; but you can reproduce the same phenomena in the same patient. Whenever the convulsions exist, you can witness the influence averted by this irritation.

As soon as I was possessed of the idea that it was through irritation exerted by the ligation, that an attack of epilepsy was cut short, I tried and found that other irritants applied to the skin produced the same effect ; for example, such as extreme cold, great heat, pinching the part ; in short, any irritation of the nerves in the region where the aura commences may be sufficient to arrest an attack. In fact the patients themselves, if they have strength of will sufficient, when upon the point of having an epileptic seizure, can, by moving the limb rapidly, rotating the arm, etc., perhaps stop an attack. Any kind of irritation from the periphery may act upon the brain and arrest the morbid activity of the cells, and that irritation can succeed even when applied upon the other side where the aura exists.

As regards other forms, if the aura starts from the stomach, anything which irritates the stomach, powerfully, as a violent emetic, will save the patient from an attack of epilepsy. Certain other means may also succeed, as acting upon the bowels by an enema that will produce a rapid and considerable action of the muscles. Pressure upon the bowels may bring about the same result, if the sensation starts from that region. A galvanic shock, on the contrary, will produce an attack in many cases. If the patient has simply a vague sensation of disturbance without any distinct place from which the aura arises, any means of producing irritation of the skin behind the ears or between the shoulder-blades, may be of some service, such as the application of ice, a sharp blow from the

hand, galvanic shock, etc. Any medicine which acts with great power upon the stomach or upon the bowels, or which acts with great power upon the nervous system, may be of service in these cases.

MEDICINAL AGENT FOR THE ARREST OF ATTACKS OF EPILEPSY.

A common remedy which is employed with some benefit consists of three or four grains of the sesqui-carbonate of ammonia in a drachm or half-ounce of tincture of columbo, or gentian, or rhubarb; it is the alcohol chiefly that acts. Taken without dilution, it is rather strong, and therefore a trifling quantity of water may be added. It should be carried in the pocket, so that it can be used at the shortest warning. Running, jumping, anything and everything that produces a change in the circulation and respiration, may be of service for the arrest of an attack of epilepsy. You may not know what means will operate best upon a patient; but, recommending such means as have been mentioned, he may try one after another until he finds that which succeeds best in his individual case. In that manner, you can, perhaps, save the patient from an attack.

COMBINATION OF THREE MEDICINES.

The combination of three medicines I have found has considerable more power in controlling epilepsy than the use of one alone or of two combined. If you employ the bromide of potassium, you must employ with it the bromide of ammonium and the iodide of potassium or ammonia. A combination of these three salts acts with far greater power than when either one is used alone. It is essential always to add the bromide of ammonium if the other bromides are employed. In these cases it is also essential to employ some means of counter-irritation at the base of the brain; or, in cases of distinct aura, some means of counter-irritation at the place where the aura starts. In those cases in which the aura starts in the finger, I have succeeded most wonderfully in controlling the attack by the application of a circular blister in the shape of a ligature to the finger itself. There is, therefore, a series of means which can prove successful in preventing attacks in these cases. As I said yesterday, if we can do so much in the way of controlling attacks of epilepsy, why should we not be able to do the same against paralysis, as epilepsy and paralysis are in many respects alike in their mode of production.—*Medical Record*, No. 382.

CORRESPONDENCE.

OUR NEW YORK LETTER.

15, WEST TWENTY-SIXTH STREET,
NEW YORK, February 26th, 1878.

The sessions of the Colleges are drawing to a close, and before this letter is presented to your readers, more than four hundred new sheepskins, issued in New York alone, will be certifying to the world that their respective owners are fully equipped with all the science and arts of medicine.

The bare mention of this fact carries with it a trenchant commentary, for we all know how impossible it is that young men, some even without the elements of an English education, shall in two years have possessed themselves of the knowledge and skill to which the professional signatures bear witness. And yet who shall provide a remedy against this regular "vernal fraud upon the public." The facility with which charters are multiplied; the ambition of practitioners to have their names associated with collegiate chairs, and the attractive manner in which professional title and social position are held out to young men, without reference to their qualifications, will always keep the benches full, and the applauding people in jeopardy of life and limb. Nothing is more inimical to the cure of this evil in America, than the unfortunate rivalry between the various colleges, which extends in some, and I believe I am credibly informed, to the admission of more than forty per cent. of the annual classes to beneficiary membership. And this system of the facile creation of M. D's., is not without supporters even among medical journalists of high position and attainments.

Fortunately, in North Carolina, you have a State Board of Examiners which can be made a partial bulwark against the evil, provided the examinations are conducted in the full intent of the law, and are not hurried over and completed, and the seal of approval set upon the applicant before this competency is satisfactorily ascertained:

On February 22d, the Society of the Alumni, of the University of New York, a sort of *dilettanti* club, held its annual re-union,

and gorged with one of Delmonico's best dinners. Nothing notable was said either medically, legally, or theologically as might have been looked for from the Doctors, Lawyers and Dominies present, who cracked nuts and decorous jokes over the Falernian from the caterer's cellar.

The proceedings of the Societies for February, have been in a great measure devoted to eulogies upon the life and character of Dr. Peaslee.

At the Academy of Medicine, Dr. Fordyce Barker, for many years in intimate relation with Dr. Peaslee, delivered the memorial address by appointment. The paper was very full in detail, and graceful and scholarly in diction. It will be published.

Dr. Emmet's address on the same subject at the January meeting of the Medical Society of the county of New York, gave a full analysis of Dr. Peaslee's character, and spoke of overwork as the cause of his death.

Dr. J. A. Wyeth read a beautiful tribute to the martyrs of Fernandina, Drs. J. C. Herndon and Preston Wellford, who died within two weeks after entering upon their self-imposed duty, during the terrible epidemic of yellow fever last year.

Dr. J. W. S. Arnold's paper presented the results of an "Experimental Inquiry into the muscular element of the first sound of the heart," being amply illustrated by photographic enlargements of the tracings, obtained by Marey's instruments.

It will not be forgotten what great contrariety of opinion has existed in reference to the factors of the first sound. The impulse of the apex against the thoracic walls, the closure and tension of the tricuspid valves, the opening of the semilunar valves, the friction of the blood against the walls and fleshy columns, the impact of the ventricular blood against that in the aorta, and the muscular *bruit* itself, have all been acknowledged collectively, and each rejected in its turn, as having an agency in the systolic sound. Particularly the muscular element has been denied by many physiologists, but the results of Dr. Arnold's experiments enable us to doubt it no longer.

They were conducted in a most patient and critical way upon living horses and other smaller animals. Rods or small India rubber bags, *ampoules*, were introduced through the jugular vein into auricle and ventricle, and other ingenious devices employed to eliminate the several factors in their turn.

But the *experimenta crucis* were with the heart removed from the body while still pulsating. Here the blood is absent; the thoracic impulse impossible, and only two sources remain from which a systolic sound could issue, viz: the movements of the valves and the muscular *bruit* itself. The first was eliminated by pinning the valves back and by division of the *chordæ tendinæ*, leaving only the muscular walls to furnish what might be heard. Careful auscultation of the still pulsating heart disclosed a distinct and well recognized muscular susurrus uncomplicated by the other noises which go to make up the complete systolic sound of a heart in situ.

Dr. Arnold is eminent as a practical physiologist, a Professor in the University of New York, under 40 years of age, and originally from Charleston, S. C.

At the stated meeting of the County Medical Society, February 25th, a committee was appointed to investigate the abuses of the Medical Charities of the city. It appears that the profession is grossly imposed on here by people who are able to pay, as it is with you, and more than one Medical Provident Association has been formed to counteract the evil.

Dr. J. C. Davis read an able and lucid paper on Hepatic Abscess, which a long residence in Zacaticas, Mexico, has enabled him to become perfectly familiar with. The practical points of interest to be abstracted for your readers are:—that it may arise from two sources, viz: hepatitis produced by whatever cause, and emboli or septic particles conveyed to and entrapped in the terminals of the portal circulation. High temperature is denied as predisposing to it, but rather it is to be sought in the habitual errors of diet and the indolence which keep the liver continually gorged in tropical regions. No positive indications for diagnosis were given. Pain and pouting led to suspicion of abscess when other troubles can be excluded; the rigidity of the *rectus abdominis* was not referred to; the exploring use of the trocar was highly recommended, as almost free from danger (only one death reported as following it in many cases), and it is regarded as, at least, an infinite improvement on the old plan of waiting. The special point in the treatment was the early and repeated (at intervals of a few days) use of the aspirator, and washing out the sac of the abscess with warm water, followed by solutions of carbolic acid, or iodine (Tr. iodine co. $\bar{\zeta}$ ij aquæ $\bar{\zeta}$ x) to be retained five or ten minutes. The punctures to be made in

the intercostal spaces, preferably the 9th, a little posterior to a line drawn vertically down from the centre of the right axilla. It is safer at that point, as the liver is in close apposition with the diaphragm, and no infiltration can take place between the two. Drainage tubes are often to be used, but do without them if possible. The prognosis, of course, is always grave, never better than doubtful, but it would seem that the experience of Dr. Davis and the Mexican Surgeons Hermenez and Condon enable us to take a more hopeful view than formerly. Under the old plans of Macnamara, Murchison, Budd, Frerichs and others, in which waiting on nature, making efforts to induce adhesions by punctures, cautery and sewing liver capsule to abdominal walls were the main features, the mortality was over 75 per cent. ; whereas under the exploratory methods, with prompt evacuation, even if the abscess has to be sought for by several punctures with the needle, the percentage of recoveries is much greater. Thus, Condon, in 12 operations had 7 successes, or nearly 60 per cent., and the lecturer, Dr. Davis, in 26 operated on, cured 12, nearly 50 per cent. This hasty abstract does not convey an idea of the literary research, the ability and absorbing interest the paper evinced.

Dr. Jacobi presented the first *fac similes* of the catalogue of the National Medical Library, and called attention to the fact that the committee of Congress to which had been referred the question of an appropriation to continue the publication had reported adversely. A committee of twenty-five of the most prominent members was appointed to bring the matter forcibly before Congress, as one of paramount importance. I am glad to note that the JOURNAL has already taking precedence in pointing out the value of this undertaking not only to the Medical profession, but to science generally, and the whole people of the United States, and it is to be hoped an ample appropriation will be secured.

The Societies have latterly had occasion to reprove some of their most eminent members for advertising themselves, as alleged, under the guise of giving certificates, to be published in the secular prints, bearing testimony to the efficacy of certain widely sold mineral waters, conspicuously the Hunyadi Janos. No one really believes they intended to advertise, but suppose if any poor devil should now sign his name to a card asserting the eccoprotic power of podophyllin, he would be made to feel the rod which has only been

shaken at the Hunyadi Janos men. Our code of ethics is fearfully unequal in its operation. One of the privileged, occupying a professorship (perhaps purchased) in a College, may lawfully by an assiduous distribution of the annual catalogue (30,000 copies), tell the world that he fills the chair on diseases of the umbilicus, and resides near the Navel Academy. But no practitioner outside of a college can send a card to his next-door neighbor to say that he has given up general practice, and for the future shall only practice circumcision, without bringing down the Jovian bolts of the other preputialists.

The code should prevent the faculty men advertising their respective specialties and residences in the annual announcements, or lay the way to publicity equally open to all. It is all bosh to allege that the cases are different—every one knows that in the main, the Professors chairs are excellent stepping stones to practice through the advertising privileges carried with them.

The question will be a prominent one at the next meeting of the American Medical Association.

The February meeting of the Ophthalmological Society was made interesting by Dr. Prout, of Brooklyn, who exhibited the new German specula for examining the pharyngeal opening of the Eustachian tubes. They promise to be very useful in the hands of the trained specialist. Your correspondent had the pleasure of meeting there, Dr. George Graham, of Raleigh, to whom the staff at the New York Eye and Ear Infirmary is indebted for suggesting the use of balsam of copaiba in obstinate photophobia from corneitis and other causes. It is smeared on the brows and lids, and Dr. Oppenheimer, the courteous resident surgeon at the Infirmary, speaks highly of its efficacy as far as the experience yet goes.

Cannot Dr. Graham furnish your readers with the account of its use in his hands, and other contributions from the records of his large ophthalmological field?

Ophthalmologists residing in the South have facilities for making observations upon the refraction of eyes among negroes, not possessed among their northern brethren. Reliable data covering thousands of cases are sadly needed in contribution to the great question as to the influence of education in producing errors of refraction. The work is not apt to prove nice, but it is in the interest of science, and of course, will secure the necessary attention.

In this connection let me urge upon your best medical men a generous response to the inquiry proposed in this issue, by Dr. Roosa, into the effect of large doses of quinine upon the audition and the state of the drum membrane. The labor is not difficult, for after the observer has made himself familiar with physiological appearances, he can easily note abnormal departures.

All the apparatus requisite to the inquiry is a watch, a small ear speculum and a piece of looking glass. Diffused daylight, the sun or a kerosene lamp may be used as the source of illumination, the rays being projected into the ear by the mirror.

The American Gynæcological Society is a select body of men, limited in number, who set themselves up, as they may well be acknowledged to be, as the CORYPHEI in their line. It professes to admit no one to fellowship who is not already distinguished in gynæcology; and assumes the high role of "taking the initiative in giving tone and coloring to the progressive advance of science in obstetrics and gynæcology; to stamp with its approval all real merit and to extinguish sham." This is a royal assumption for a body so purely autochthonic, but when we are told that it embraces such names as Sims, Barker, Emmet, Thomas, Atlee, Howard, Battey, and the late Drs. Buckingham and Peaslee, we must concede what they claim.

It would be much better if their papers, the results of their own work were given to the profession through the regular periodicals, instead of being hidden away in a yearly tome of transactions which few can afford to purchase.

Your correspondent witnessed a late case of ovariectomy by Dr. Thomas. The practical details in the procedure may be useful to those who are interested in that line. It was at the Woman's Hospital, not in the main building, however, but in a small frame cottage on the grounds, to diminish the danger of septic influences. The temperature of the room (10x10) was about 80°. Woman on a narrow table, on her back, knees flexed, and legs and feet hanging down over the lower end, and supported on a chair. Six assistants, one for the ether, two for manipulating the abdomen and body, one having charge of the instruments, two for the carbolic sprays—besides two nurses for handing warm water to the operator to keep his hands clean. The instruments were scalpel, grooved-director, scissors, sounds, trocars, vulsella, needle carriers, needles, ligatures

of plaited silk, silver sutures, &c., all kept in a shallow pan of carbolized water, in charge of an assistant who wore rubber gloves to preserve his hands from the caustic effects of the acid. Allis' inhaler was used. The incision seemed to be about 5 inches long, in the middle line, below the umbilicus. After the hemorrhage had ceased the peritoneum was opened upon a director, and the adhesions, which were extensive, broken up with sounds and the hand. When the multiple cysts were tapped with the trocars, the woman was rolled over on her side to allow the colloid contents to flow out. The tumor being reduced sufficiently in size was seized with the vulsella and withdrawn by traction and lateral motion. The pedicle which was very broad was first secured by a ligature, and afterwards included in Thomas' clamps which seem to fulfil the indication better than any other, grasping the mass and compressing it in a circular way like a ligature, and not mashing it out flat as other clamps do. It is, moreover, very light and easily manipulated.

A portion of the omentum, much thickened and inflamed, was ligated and excised, and the ligature of silk being cut off short the mass was returned into the abdomen without securing it in the wound as is Atlee's custom.

The peritoneal cavity was carefully cleansed by sponges on staffs, and the incision closed by interrupted silver sutures, followed by the usual plaster and bandage. The tumor was of the left ovary, the right ovary was, contrary to the diagnosis, not involved, although such a diagnosis was perfectly warranted, as there had been no menstruation for several months.

The operation consumed about twenty minutes and during the entire time the carbolic sprays were kept actively at work in and about the wound. I am informed, on excellent authority, that this distinguished ovariologist has operated nine times without a loss since the first of the current year.

At the meeting of the Obstetrical Society, February 19th, Dr. Blake exhibited an apparatus for the administration of nitrous oxide gas commingled with atmospheric air, which promises to be of great service in the use of this agent as a tonic in the place of oxygen gas, which many, whose experience with it has been large, declare has not met their expectations. Dr. Doremus says—the

nitrous oxide is capable of furnishing a larger amount of active available oxygen to the system than pure oxygen gas itself. And when we consider the molecular constitution of nitrous oxide, with its loosely held atoms of oxygen, ready to be yielded up on the slightest demand, in the nascent state, we may fully understand the force of this eminent chemist's statement. Dr. Barker and others cited instances of its beneficial influence in anæmia and other adynamic conditions, and particularly in collapse following post partum hemorrhage, the effect in all being very marked. In asphyxia a large field is open for its use. The dose as a tonic, for the present is estimated at about five gallons a day, slowly given. The immediate effect upon the blood is to impart to it a marked red, arterial appearance, but it should be diluted with a greater or less quantity of air to *obviate its anæsthetic effects which are undesirable*. Should lividity or blueness of the surface occur it is because the gas has been given too freely, and requires dilution.

It produces a natural, sweet sleep which need not follow, however, for several hours, and the awaking is not as from a soporific narcotic. I would suggest that it furnishes the promise of great usefulness, in narcosis from opium, chloroform, hydrocyanic acid, &c., in threatened asphyxia from croup, diphtheria, asthenia, emphysema, in the resuscitation of the new born, and possibly in the treatment of diseases of suboxidation, as diabetes, lithuria, gout and their congeners.

This gas is far more easily obtained than oxygen, it being manufactured now by almost every dentist, even in country locations, and may be had in compressed form, keeping indefinitely, from Codman and Shurtleff, of Boston, Tiemann, of New York, White, of Philadelphia, and other surgical instrument makers.

The mouth piece should be constructed to graduate the admission of air during inhalation. In this connection I need only point out the superior and safe qualities of nitrous oxide in many details of minor surgery, used, of course, as an anæsthetic—hence undiluted.

DER.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES,
PARIS, February 15, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—Professor Peter has just been elected a member of the Academy of Medicine by a very decisive majority, having defeated Dr. Maurice-Raynaud the great champion of the cold water treatment of typhoid fever. The successful candidate commenced life as a “compositor,” but in latter years he has greatly distinguished himself as a physician, and his election is generally regarded as a well-earned compliment. Although the defeated aspirant had fewer friends in the Academy, they made up in enthusiasm for the sparsity of their ballots, and they submitted with ill-concealed reluctance to the adverse decision which the count disclosed. I rather incline to the opinion that there was some partisanship in the antagonism which manifested itself to their favorite, for, although a physician of great ability and learning, his advocacy of the “Brand System” has attracted to him no little of the prejudice which has so liberally engendered here against that special mode of treatment.

Last year an exceedingly virulent epidemic of typhoid fever visited Paris, in connection with which there occurred a very exhaustive, and, at the same time, acrimonious discussion in regard to the alleged advantages of the “Brand System.” It was universally agreed that the theory upon which this method of treatment is based is a fallacy, and that *heat* does not play so important a part in the clinical history of typhoid fever, as Liebermeister and his school here so positively asserted. The facts which have led to this coincidence of opinion are chiefly these, viz :

1st. The same parenchymatous degenerations are found connected with other diseases which are not invariably marked by a high temperature, and which only run a brief course. In peritonitis, pneumonia, pyæmia, acute atrophy of the liver, cerebro-spinal meningitis, and, in fact, in a majority of the diseases which are characterized by decided constitutional disturbances, and a special malignancy identical degenerations are found.

2d. Ulceration of the glands of Peyer is the rule in typhoid fever, whether the attack be a long or short one, and without regard

to the degree of heat developed or the plan of treatment followed.

3d. There is no necessary and absolute relation between the degree of heat developed and the virulence of the disease itself. Some cases of typhoid fever terminate fatally without a concomitant development of pyrexia; while in many instances a persistent temperature of 104° is followed by results less serious in their nature than a temperature of 101° .

To a repudiation of the dogma upon which the advocates of the cold-bath so confidently rely, a large majority of the physicians of France have added an indiscriminate opposition to the "Brand System" in all of its details. They, in fact, have argued themselves into the belief that this plan of treatment necessarily prolongs the duration of the disease, intensifies its character, increases its complications and renders a recovery from it a matter of the purest accident and the greatest good luck. As a natural consequence, therefore, they have but little respect or affection for each of their countrymen as have adopted this "alien and senseless heresy," and they are not prepared to render them the fullest justice in a contest for academical honors.

This antagonism has been greatly intensified by certain statistics which were furnished during the controversy by the city of Lyons. In consequence of a debate which took place there on this subject, a number of questions relating to the origin, clinical history and proper treatment of typhoid fever were addressed to all of the physicians of the place, and their answers were then carefully collected and compared.

From the papers thus secured it appeared that from the middle of the year 1874 to the end of the year 1876, there occurred 750 cases of the disease; that of these cases 234 were treated by the "Brand System," 154 were treated by cold affusions and similar means, and 358 were treated by other methods than those into which cold water entered as an element; and that the mortality for the cases treated by cold baths was 9 per 100, for the cases treated by affusion, &c., 6 per 100, and for the cases treated by the "old methods," 5 per 100.

There was also established at the Hotel Dieu a special service, arranged so as to secure a most careful and vigorous application of the "Brand System" in order that its merits might be subjected to a veritable *experimentum crucis*. The result showed that out of

the *fifty-two* cases which were treated in this ward, *nine* terminated fatally; while “extensive ulcerations of the glands of Peyer,” were, as a general rule, revealed by the scalpel.

Dr. Maurice-Raynaud, who, as I have already indicated, is the most conspicuous champion of the cold bathing system that France has produced, while uniting with his confrères in a renunciation of the *theory* upon which Brand has based his system, claims for it much *practical* utility in the treatment of typhoid fever. He asserts that, although pyrexia is not the exclusive agent in the production of the changes which take place in the tissues, and while the ulcerations of the glands of Peyer remain the characteristic lesion under all circumstances, his experience justifies the following conclusions, viz: 1st. That cold baths, properly employed do not increase the tendency either to bronchitis, pneumonia, or intestinal hemorrhage, but on the contrary, under these complications more infrequent and less serious in their character. 2d. That although the duration of the disease is not abridged by this method of treatment, its intensity is modified and its fatality diminished. As regards the statistics from Lyons, he says that the recorded percentage of *five* deaths in the *hundred* cases treated by the “old methods,” was due to some lucky chance and cannot be taken as a proper standard of comparison, since all other experience proves that a percentage of *twenty* deaths in the *hundred* cases is the rule in this regard.

He also establishes the testimony of the physician who had charge of the special ward above referred to, that only the most desperate cases were confided to him; that the percentage of mortality was really 16 in 100, notwithstanding the especial virulence of the epidemic encountered; and that the mortality in the entire hospital, under the “Brand System,” was 12.47 per 100 during the year 1874, 18.05 per 100 for the year 1875, and 18.18 per 100 for the year 1876, although only those persons most desperately attacked were subjected to this mode of treatment. With reference to his own experience, he says that, during the year 1873 he treated at the Hospital Lariboisière 30 typhoid fever cases by the “old methods,” and had a death-rate of 26.06 per 100, and since then he has treated 117 cases—many of which were exceedingly virulent—by cold-baths, and has lost but sixteen of the entire number or 14 per 100.

In view of these facts, and also in consideration of the greater

comfort which is secured to those who suffer with the disease, he unhesitatingly advocates the "Brand System," and declares that it gives results far superior to those of any other plan of treatment.

Without attempting to decide this controversy, I cannot help saying that, in my judgment, the truth lies mid-way between the two extremes of opinion.

There are, undoubtedly, cases in which cold-baths can be employed with advantage; while there are others—and the proportion is a large one—in which a recourse to them is fraught with extreme peril. Whilst according to this method of treatment all the advantages which can possibly accrue from a reduction of temperature in typhoid fever, I can but remember that *pyrexia* is after all but a *symptom*, and that in attempting to combat it, the *disease* itself may be neglected or even intensified and complicated. In a considerable number of typhoid patients the tendency is to *syncope* and death occurs from *asthenia*. When a life is thus staked upon the uncertain efforts of an enervated heart, the slightest movement or exertion is dangerous, and the very manipulations and changes of position incident to this special mode of treatment, are sources of additional peril, and should consequently be avoided.

For one also I should never think of invoking the "Brand System" when dealing with patients whose lungs are profoundly congested or skins unduly sensitive or secernant, or kidneys much engorged and desquamative, or in connection with whom a decided tendency to collapse manifests itself.

In this connection, it seems appropriate to mention that M. Feltz has recently communicated to the Academy some experiments, according to which, a figurative ferment exists in human typhoid blood. These observations showed that the living normal venous blood does not contain a ferment; that ammoniacal urine may be deprived of its ferment by filtration in *vacuo* through a thick layer of charcoal; and that living typhoid blood holds in suspension living cryptogamic germs, capable of vegetating in receivers containing pure air only. Since no reduction of temperature, compatible with the life of the organism, can destroy these ferments or restrain their vegetation, and this argument is supplied to those who have joined issue with Brand and who still rely upon the "old methods" in the treatment of typhoid fever.

M. Cyon, who sometime since demonstrated the intimate relations existing between the semi-circular canals and the centres of innervation of the eye, has attempted to explain the physiological signification of these relations, in a very interesting paper which was presented to the Academy by Claude Bernard just previous to his fatal illness. According to M. Cyon the semi-circular canals are the peripheric organs of the sense of space, that is to say, the sensations existed by irritation of the nerve-endings in the ampulæ of these canals supply us with our ideas of length, breadth and thickness, the impressions made in each canal corresponding to one of these three dimensions, and inducing our perceptions concerning the arrangement of the objects around us and the position of our own body in relation to them. He also believes that the physiological stimulation of the peripheric termination peculiar to the organ of the sense of space, takes place mechanically by means of the otoliths in the ampulæ—these otoliths being excited into motion by every active or passive movement of the head and also by the aerial waves which the membrani-tympani transmit to the fluid contained in the semi-circular canals. This being so, it follows that the *portio mollis* of the seventh nerve contains two nerves of sense altogether distinct in their offices, viz : the auditory nerve which furnishes the perception of sound, and the nerve of space which controls the distribution and graduation of the force of innervation which may be communicated to the muscles which produce all the movements of the eye, the head and the rest of the body. The disturbances, therefore, which occur after lesions of the semi-circular canals are due, 1st to a visual vertigo produced by a disagreement, the space seen and the ideal space originally conceived through the agency of the sensations developed in the normal condition of the canals ; 2nd to the false notions which result from a confused and incorrect judgment as to the position which the body occupies in space ; and 3d to the disorders of the distribution of force in the muscles.

This explanation is as original as it is plausible ; and should it prove susceptible of positive demonstration, it will serve not only to enlarge the area of positive physiological knowledge, but to throw light upon certain problems in cerebral pathology which have, heretofore, remained obscure.

The use of pure creosote in pulmonary phthisis is attracting much attention here. M. M. Bouchard and Gimbert report that they have treated in this way, 93 patients in various stages of this disease, of whom 25 were "apparently cured," 29 were "improved," 18 remained no better and 21 died. By "apparently cured" these gentlemen mean "a cessation of the cough and expectoration a disappearance of the fever, an increase of the weight of the body and such a change in the physical signs as indicates the progress of cicatrization;" while by "improvement" they denote "a condition in which the cough and expectoration are materially lessened, the body-weight increased and the physical indications of an arrest or diminution of the process of destruction." In a word, in 54 cases out of 93, creosote exercised a decidedly beneficial influence on the disease; and, although the efficacy of the treatment has not been tested by a *post mortem* examination, the evidence in its favor, as furnished by the alterations of symptoms and signs above referred to, seems incontestable. It appears to act in this regard chiefly by limiting the bronchial secretion, and thereby in the end by relieving the cough and inducing attacks of hæmoptysis less frequent and severe. As might be predicated on general principles, it increases the appetite, restrains vomiting, and neutralizes all fœtid products. The creosote employed is a pure preparation, free from carbolic acid, having a specific gravity of 1066, forming a clear solution with collodion and being soluble in diluted alcohol. The daily dose given varied from 40 to 60 centigrammes—6 to 9 grains—while in rare cases it was increased as high as a gramme—15 grains. The following formulæ were found specially useful: Pure creosote, 13.5 parts; tincture of gentian, 30 parts; alcohol, 2.50 parts; malaga wine, sufficient to make up a thousand parts—of which from two to five tablespoonfuls were taken daily; pure creosote, 2 parts; cod liver oil, 150 parts.

As I said before, these statements are attracting much attention; and there seems to be a very general desire to give this plan of treatment a thorough trial, since all other plans have proved so barren of results and have so little to recommend them to the confidence of the profession.


I ought to mention, perhaps, that, since my last letter was written, both hydrogen and nitrogen have been liquefied, and even solidified, in the presence of the Academy.

Within the last few days the French profession has been plunged into the deepest mourning. One of its proudest representatives has paid the debt of nature, and left behind him a void which all appreciate but none can fill. Claude Bernard, the great evangelist of modern physiology whose name has become a household word wherever medical science has a worshipper, is dead.

Space will not permit me at the present moment to give a synopsis even of the splendid incidents by which his life was illustrated or of the wealth of honors by which it was crowned. Suffice it for this occasion to say that his achievements will be appreciated by the remotest generations and that France has no prouder name in all her glorious annals. Mourned by an entire people, buried by a nation and regretted by the whole world of science, this great and good man has completed his career and gone to his reward. Peace to his ashes and perpetual honor to his memory! In another letter I shall endeavor to do justice to his character and to tell of what he has done for medicine and for humanity.

Very truly and respectfully yours,

EDWARD WARREN, (Bey) M. D., C. M.



Dr. Milner Fothergill, West London Hospital, recently gave the largest dose of atropia we have yet noticed, viz :—one grain—to antidote from twelve to fourteen grains of opium taken by a female. No symptoms of belladonna poisoning were noticed, the patient recovering completely. It requires the weight of the authority of a man not less eminent than Dr. Fothergill to establish such a precedent.


The English Medical Journals repeat the rumor that Mr. Erasmus Wilson will vacate the chair of Dermatology at the Royal College of Surgeons, and that Mr. Hutchinson will be a candidate for the chair.

EDITORIAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C. }

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SEASONS OF THE PREVALENCE OF DIPHTHERIA.

We are occasionally struck with the remarks of writers, the great majority of whom, perhaps, hold that diphtheria is a disease prevailing in winter, and one very distinguished physician believes it to be essentially a disease of cold weather. In order to initiate the solution of this obscure matter as far as this locality is concerned, we have collected the mortuary statistics covering the entire period since the recognized invasion of this section by diphtheria, and have brought them together in a diagram to convey at a glance what we have learned.

The figures from 1 to 22 denote the number of deaths in given months. The white unbroken line indicates deaths among the whites for eleven years, the dotted line indicates deaths among the negroes for five years. The average range of thermometer for six years as observed at the United States Signal Station, as well as the rain-fall for the same period are given in the lower lines of the diagram.

Diagram of the death-rate of diphtheria in the city of Wilmington, N. C. The unbroken white line indicates the whites, the dotted line the negroes. Figures from 1 to 22 denote number of deaths,

As far as our investigation goes, the death-rate has been greatest about the season of the highest thermometer and greatest rain-fall, and it has rapidly decreased in the colder seasons. We have no statistics to show the prevalence of the disease in different seasons, but it is fair to infer that increased death-rate denotes also increased prevalence.

The approximate parallel as observed in the diagram between the deaths among the whites and negroes in the same seasons is very striking, and we believe that if the collection of these items among the negroes had extended over a longer period, the parallel would have been even more marked. Another item we will mention which accounts for the slight difference in parallelism, and that is the large number of deaths, the causes of which were returned "unknown," when it was well-known that many negroes were dying during the prevalence of diphtheria among the whites, with a disease believed to be diphtheria. As most of them died without having a medical attendant, it is still in doubt.

In the months of September and October, the soil soakage must have reached its height as reference to the diagram will show, a series of six years average giving 7.81 inches in August and 6.91 inches in September. The thermometric averages for these months for the same period being 78.7 and 73.3, respectively, being very near the highest annual range of the thermometer.

In a report on the epidemics of France by M. Briquet, made to the Academy of Medicine in 1876, he deduces among other valuable facts, that the epidemics of diphtheria as a general rule commenced during the last months of the year after abundant rains, east winds and low temperature.

Dr. Thorne, of Essex, England,* says, "The effects of temperature and rain-fall on the spread of the disease (diphtheria) was very marked, and from the tables he has prepared it is seen that the largest number of attacks occurred during the months of excessive rain-fall, and comparatively low temperature, whereas with a rising thermometer and diminished rain-fall the number of attacks became smaller."

That increased temperature with greatest rain-fall, should in one section be concomitant with the maximum death-rate, and excessive

*Practitioner, November, 1877.

rain-fall and diminished temperature be its concomitant in another part of the world shows how difficult it is to estimate the causal relations of season and climate. Our desire is not to construct a new theory or break down an old one, but to give the facts as we know them and wait patiently for the solution of the question.



THE OLD WAY OF GETTING BEFORE THE PUBLIC.

“*A Delicate Operation.*” * * a very delicate operation was performed on * * * for the removal of an encysted tumor of the right upper eyelid, due to an obstruction of the ducts of one of the meibomian glands, thereby allowing the secretions of the sac to accumulate. These tumors create a marked temporary, and if allowed to attain much magnitude, may give rise to a permanent deformity and seriously interfere with the sight by the dragging downward of the upper lid. Considerable care is requisite on the part of the operator in the removal of these growths to avoid a section of the strained muscular fibres of the levator palpebræ muscle, the division of which might produce ptosis * * * while on the other hand equal care should be taken not to divide transversely the fibres of the orbicularis palpebrarum muscle, the section of which might give rise to a “hare-eyed” condition. * * *—*Oxford Torchlight.*

The versatility of the editors of the public press is something remarkable. Our New York correspondent had occasion to speak of the metropolitan press last month, and now we take pleasure in reproducing the above report of a surgical case by the editor of the *Oxford Torchlight*, to show that versatility is not the rare talent it is supposed to be. The editor handles the difficult technical ties with all the ease of a youngster just from his quiz master. Is he not wrong in assuming though, that his readers are as well versed as he is in such wonderful things as *ptosis*, and the functions of the meibomian glands, and the orbicularis palpebrarum. The culture of the citizens of his section is very superior we know, but the road to renown would be better assured through the columns of the

NORTH CAROLINA MEDICAL JOURNAL, and we cordially invite contributions from the surgical clinic of Oxford, whenever there is anything to report as important as an "encysted tumor of the eyelid."

We are afraid that the editor of the *Torchlight* is not aware how offensive it may be to the surgeon to have his cases paraded before the public, and we will ask him to borrow the Code of Ethics of the American Medical Association from his family physician and refer to Article on *Duties for the Support of Professional Character*, Article, I, Paragraph 3.

EX-SURGEON-GENERAL HAMMOND.

Report of the Committee on Military Affairs, to whom was referred the bill for the relief of William A. Hammond, M. D., late Surgeon-General of the Army.

This report shows conclusively that a great wrong has been done ex-Surgeon-General Hammond, and there is no honorable way but for Congress to make the reparation. The action against Dr. Hammond seems to have been such, as the actors themselves would scarcely have pursued in the times of "piping peace."

If a committee with access to all the facts in the case, can recommend a reversal of the decision of the Court Martial held in 1864, surely reparation cannot be made too speedily. Individuals find it hard to forgive people whom they have injured, and the same weakness seems to possess Congress.

The charges and specifications enumerated in this Committee's report are new to us, and do not include the only charge we ever heard made against Surgeon-General Hammond, which was this: In conversation with an assistant surgeon belonging to a Federal regiment during the war, he mentioned the obstacles in the Medical Department on his side, and thought that Dr. H. was bringing the medical service into disrepute, and the health of the army into great jeopardy, by striking out calomel and tartar emetic from the table of medical supplies, and seemed to regard it as an ominous foreboding of greater calamities which were to follow.

MEDICO-LEGAL INVESTIGATIONS.

The address of Professor Chaillé places American Medical Jurisprudence in a light that it can be most easily studied and estimated. The work done by Dr. Chaillé is exhaustive and valuable. It claims that although the medical profession has spared no labor to bring medical jurisprudence up to the standing of a science, that as a science it has far outgrown the uses made of it as a means of justice.

We were not aware that the enormity of official criminal negligence was quite as wide-spread as we learn from this address. In most Southern States just emerging from the tornado of revolution little else could be expected than the subversion of law ; but the evil is not confined to Southern States, nor is it a new one. The time-honored coroner's jury is usually the starting point of medico-legal investigations, and a shabby and perfunctory performance it is.

Dr. Chaillé says :* “ In the the United States there are probably forty-five thousand medico-legal autopsies made annually, The service of a skilled expert at these “coroner's inquests,” which have exceptional opportunity and power to detect crime, is of inestimable importance ; the opportunities there presented, if once lost can never be regained. Further, our courts have annually from twenty-five hundred to treble this number of criminal trials necessitating medical testimony ; and of these a large part originate from the coroner's inquest. If to these criminal be added all the medico-legal civil trials, it will be found, I doubt not, that our courts require medical evidence in not less than twenty-thousand cases annually. Whatever the number may be, it would indicate inadequately the number of citizens whose welfare is involved, and the extent to which society is interested in the efficient application of medical knowledge to the administration of justice.

“ Now what are the methods which this Anglo-American law adopts to secure in practice that ‘ best attainable evidence ’ which in theory it demands ? It entrusts medico-legal autopsies, which require special medical and some legal knowledge, to those having neither the one nor the other, except by accident ; for, these coroners (whose inexperience our law insures by constant ‘ rotation in office ’) owe their position wholly to political popularity, a qualification which a competent expert is most unlikely to possess.

“ Are these unqualified officials supplied with efficient aid ? If

*Origin and Progress of Medical Jurisprudence 1776-1876. A centennial address by Stanford E. Chaillé, A. M., M. D., Professor of Physiology and Pathological Anatomy in Medical Department, University of Louisiana. Reprinted for the benefit of the Legal and Medical Profession.

so, again by accident; since the law leaves it to chance, or the corner, or to his still less qualified jury, to provide a medical expert; and, as is usual, accident and ignorance provide inexperience and incompetence. Could ingenuity devise for medico-legal autopsies any methods more inefficient than these, which Anglo-American laws, framed before the birth of Medical Jurisprudence, have barbarously perpetuated?

“On this Pelion of inefficiency our legislative giants have piled an Ossa of absurdity; for, besides these fatal defects in the primary legal authorities, Anglo-American law, in order to secure ‘the best attainable evidence’ for its courts, where poverty and dishonor as well as the halter are administered to free citizens, clings to a method as sadly ludicrous as it is antiquated. To plaintiff and defendant the law gives full license to summon such medical witnesses as each has already found reason to believe entertain opinions the most contradictory. Who are these partisan witnesses thus surrounded by the law to apply the power of medical knowledge to the administration of justice? Surely these legal representatives of science must be competent experts? No. Well, experienced and educated physicians of repute? No. Then, of course, graduates, at least, some fledgeling hatched in nine months, and fully feathered with the plumes of every branch of medicine, Medical Jurisprudence included? No, not indispensable, since as ‘a general rule,’ it has been adjudged that any practitioner of medicine (that is, any man who dubs himself Doctor) has sufficient knowledge of medical science to furnish justice with its ‘best attainable evidence.’ ‘O, [this] offense is rank, it smells to Heaven.’

“Common sense would presume that laws, so prodigal to ignorance and pretension, would provide means to test the value of scientific opinions by eliciting the facts upon which, if valid, they must be founded. Not so; since these opinions are replies to questions, which often by their very structure comically prove entire ignorance of the facts involved; for they are propounded by lawyers to whom these facts are unknown. Finally, it would be presumed that the decision as to the weight due such opinions would be left to a judge or jury specially chosen. No. Even this last poor boon, is denied by the law!

“With the power of medical science thus crippled at the corner’s inquest, then prostituted by the partisan opinion of incompetent experts, then perverted by advocates, and at last when emasculated of all vigor submitted for decision to those unable to estimate its weight; what wonder that such gross misapplications of medical knowledge brings upon it that public contempt which belongs justly to methods so monstrous, and to which true medical knowledge is a helpless, pitiable, and disgusted victim!”

These convictions are only realized by a few, but they should take firmer hold upon the masses of our good citizens. No one knows how soon the imperfection of the present system may work to his disadvantage or that of his friends.

The prostitution of the coroner's inquest in this section of North Carolina needs special enactment by the Legislature. As though it were not enough that the coroners are selected by ballot, and the office sought for the money, thereby multiplying inquests and diminishing justice, in New Hanover county the commercial emporium of the State, the Commissioners offer FIVE DOLLARS for a medico-legal autopsy, and finding this too burdensome have engaged the services of a universal and salaried expert at a very small sum! What can be the aim of these officials if it is not to break down the law or bring it into disrepute or ridicule, it is hard to say. They seem not to see the wise course, esteeming no course wise apparently, which does not enable them to present an annual report of reduced expenses. How easy it would be for the Commissioners to take upon themselves extra-official power, and select only such cases as are considered proper to examine, and then paying an expert at such a competent fee as they, as business men, would demand for services in their line. In this way instead of the coroner going to every trivial case, to have the verdict of twelve men, whose opinion in nine cases out of ten he puts into their mouths, let the sum be expended on one case and do it thoroughly. It is as correct for the Commissioners to act thus extra-officially, as it is for them to offer a fee of *five dollars*, when the law puts it at *ten dollars* as the minimum.

How to proceed intelligently without the coroner is a well educated physician, there seems at present to be no solution. In Wayne county, we understand, one public spirited physician has undertaken the duties of this office, in order to remedy the evil so long existing, and the results have been admirable. The Legislature has an easy way out of it, and that is to declare no one eligible to the office of coroner but a regularly licensed physician. As to who is a regularly licensed physician the law of North Carolina has very wisely determined. It has come to this pass now, that either the coroner's inquest should no longer be a part of the machinery of justice, or it should be so reformed as to make it efficient. We confess we have no faith whatever in an early amendment of the law, but esteem it our duty, nevertheless, to point out what we consider the best way to bring about reform.

One Southern State has actually taken a backward step, the Supreme Court of Alabama declaring that medical expert witnesses

are bound to give their expert opinions at the same rate that ordinary witnesses are paid, or refusing, to suffer the penalty for contempt ! Will the same court ever decide that a lawyer should give gratuitously his opinions because demanded by a court ? Such an example would be very precious.

But let us return to Dr. Chaillé's paper and quote his suggestions for remedy of medico-legal investigations :

"One proposal is that special juries be provided for special cases, and another is, that a medical assessor be appointed to advise and assist the court ; either would provide better judges of medical testimony, but neither makes any attempt to supply 'the best attainable evidences.' A third measure proposes a commission of experts, chosen either by mutual consent, or one by each party and a third by the judge. This great improvement could probably be adopted more readily than any other measure suggested ; but none of those thus authorized to appoint have knowledge necessary to enable them to select competent experts, and therefore this measure would certainly not secure 'the best attainable evidence.' A fourth proposal is the adoption of the French law which empowers the judge to appoint a medical commission. French authorities, while urging the adoption of the German system, denounce their own with even contemptuous bitterness, asserting that their judges rarely appoint competent experts, but generally their own family physicians and practitioners of merely popular repute. A fifth proposal, which would require all graduates in medicine to be competent experts, as well as practitioners, has long been, and is daily becoming so much more impracticable, as to deserve no notice except as illustrating how inadequately is estimated the extent and character of the special knowledge necessary to a medico-legist.

"Professor Gross urged, in 1868, that the Judges of the Supreme Court of each State should appoint a Commissioner in every judicial district, to elect and estimate medical evidence ; and that he should be provided with two or more medical experts as assistants, to make all medico-legal examinations. This is the only measure, thus far considered, which aims a practical blow at both our evils." * * * *

We sincerely hope that Professor Chaillé's address will find its way into the library of every doctor and lawyer in the land.

REVIEWS AND BOOK NOTICES.

Transactions of the Twenty-Eighth Annual Meeting of the American Medical Association. Held in Chicago in 1877, pp. 694. Philadelphia, 1877. Collins, Printer, 705 Jayne Street.

This volume in many respects is a very important one, embracing as it does valuable papers in medicine and surgery, and we regret that their consideration at sufficient length to do them justice would carry us beyond the limit of our space.

The address of the President, Dr. Bowditch, of Boston, was well worthy of the occasion. None knows better than the speaker, the past and present condition of our National Medical Association, and we may say that few would have spoken the truth so frankly as to the reasons why the Association has lost reputation of late years. It must have been a painful duty for the President to allude to these short comings of the Association, but now that they have been manfully spoken it behooves American doctors to ponder the situation honestly. We cannot do better than to give in Dr. Bowditch's language the conclusion of the whole matter.

"But the future of this Association depends mainly upon the way in which physicians, especially the young scientific physicians of the present hour, do their duty towards it. If our best men will not come up to the meetings, and work for the common good of all; if they stand aloof, uttering vain complaints of inferiority of our work, or actually scoffing or sneering at us, we shall accomplish less hereafter than we could wish. But we shall certainly live in spite of all opposition, and if we, who, year after year, attend these gatherings are determined that, so far as in us lies, nothing but what is excellent shall be allowed, and that our publications shall be sifted by trained experts of every iota of dross, then we shall be sure of doing a really noble work, and shall be able eventually to claim and to get the respect of the whole profession.

"The Association is gradually and healthily growing stronger. Each year it will have new young life instilled into it. Thus it will have combined in it perpetual youth, a stalwart manhood, and, as I sincerely trust, a genial old age."

We must unwillingly pass by the "*Address in practice of Medicine, Materia Medica, and Physiology*," by Dr. P. G. Robinson, of St. Louis, and the paper on "*Typical cases of Phthisis with results*," by Dr. Charles Denison, of Denver, and devote the rest of our space to the "*Report on Animal Vaccination*," by Henry A. Martin, M. D., of Boston.

It is impossible that any more important work can claim the attention of the medical profession and the people of the United States. Upon the clear solution of the question involved in the paper before us depends the future of vaccination. It has been a serious lay enquiry for the past fifteen years, Is vaccination after all the beneficent thing it has so long appeared to be? Are we not in our desire to protect ourselves against the remote chances of small-pox undertaking a most questionable operation, and even running the risk of bringing greater evils than small-pox upon ourselves? It would have been better for the mass of the medical profession if they had taken the matter so much to heart, and sought with interest the causes which have brought about so much anxiety to the laity.

In this country, perhaps, the routine course of the practice of vaccination would have never been brought to the bar of enquiry except for the outbreak of the war. The massing of men into great armies made it necessary that vaccination and re-vaccination should be performed to a very great extent, for as among the rural southern population there had been no compulsory vaccination laws, and as the practice was only set in motion by the alarm caused by a case of small-pox in a neighborhood, the number of primary vaccinations necessary to be done, taxed the power of the army purveyors to their utmost. Such a state of things has been truly called a vaccine famine, and it amounted sometimes to a panic. The history of the vaccination practice in the Southern army is too painful to review, and but for the lesson it has given to the world had better not be recited.

Soldiers partook of the panic, or wantonly courted an evil which gave prospect of disability and furlough, and whole companies performed so-called vaccinations on their own responsibility with matter, which was in a great many instances nothing less than pus from a scorbutic ulcer, and in some well authenticated cases virus from indurated syphilitic ulcers. From the camps this evil practice spread to the towns and villages, and reversely, until throughout the confederacy there was a crop of so-called vaccinations bearing no relation whatever to the protective Jennerian sore.

It was then the government sought to return to first principles, viz: to procure a crop of vaccine vesicles by the variolation of cattle after the method of Ceeley and Thiele and Sunderland. In

Richmond, Virginia, the experiments devolved upon Surgeon Jas. Bolton, in Wilmington, N. C., on Surgeon A. M. Fauntleroy, we are told, and like work was done at a station in Tennessee, perhaps Greenville; careful work was done by these gentlemen, than whom none were more conversant with the literature of the subject. Their result was negative and we may be thankful that it do not cause such a disaster as we have known to follow, *i. e.*, the propagation of small-pox from vesicles mistaken for vaccinia.

In the Northern armies the same evils existed to a great extent, if we are to judge by the seven hundred spurious vaccinations innocently done by us with crusts from the Surgeon-General of United States army, in 1865. We think it may be stated without fear of contradiction that spurious vaccinations were the rule; and the student who had trusted to his observation during the late war to learn to recognize the typical Jennerian vesicle, would look upon a vesicle the result of animal virus with doubt and suspicion.

This hasty glance at the condition of vaccination practice, covers the space of about five or six years, and indeed no new light came to us until in September, 1870, Dr. Henry A. Martin, of Boston, inaugurated the greatest reform known to the practice of medicine in this country, by the introduction of animal vaccination. We will adopt Dr. Martin's definition to make it clear what he means by animal vaccination.—“The inoculation of a young selected animal of the bovine species, from an original spontaneous case of cow-pox, from this, others, and so on in continuous and endless series as a source and the only source of virus to be used for the protection of the human race from variolous disease.”

Dr. Martin sent a special agent to Paris to obtain supplies of virus from Professor Depaul, who propagating virus from the now world-famed case of spontaneous cow-pox which occurred in Beaugency in 1866. Dr. M. had previously received some animal virus of this stock, and had gathered sufficient experience of the details of inoculation to enable him on the arrival of the virus brought by his agent to proceed in the work of propagation with more confidence. He is very accurate and explicit as to the details and genealogy of his stock, and informs us that the virus brought to America was from the 258th, 259th and 260th animal of Dr. Depaul's series, beginning with the heifer of Beaugency.

He tells us furthermore that, “during the Franco-Prussian war

and the seige of Paris, animal vaccination ceased," and Professor Depaul assured him that virus carried by his agent in 1870 was the last left that city, and that, during the seige the "stock" was lost, adding further that "no comments need be made on pretended 'importation' of Beaugency virus since the Franco-Prussian war."

It is a striking temptation to follow up the historical details of animal vaccination in Europe, but we must pass by this interesting portion of the subject to notice the "peculiarities of the phenomena of vaccinia induced by the use of original cow-pox virus, or early removes therefrom, and of the virus of long humanized cow-pox." Under this head is described the appearances of the vaccine disease as pictured by the earlier writers, a branch of scientific knowledge so long neglected by the mass of the profession that it is worth re-producing.

"The duration of this disease, as described by a great many of the early writers on vaccination, and by an occasional original observer during the last fifty years, who has enjoyed opportunities to study it, varies from twenty-one to even thirty days from the insertion of virus to spontaneous fall of the crust, papulation at points of insertion at end of third or beginning of fourth day, first development of vesicle at end of fifth day, commencement of areola latter end of ninth or beginning of tenth day, decline of areola end of twelfth and often not till the thirteenth or even fourteenth day, increase of growth of vesicle till the complete decline of areola, and even for two or three days after the areola has entirely disappeared; secretion evidently taking place into the periphery of the vesicle even after desiccation of its centre has commenced. Complete desiccation of the vesicle and consequent formation of crust or scab not accomplished till the sixteenth or seventeenth day; the crust never spontaneously falling before the twenty-first day, much more frequently not before the twenty-fifth day, and often its fall is delayed till the twenty-eighth, thirtieth, thirty-second, and occasionally even a day or two later. This crust, the result of vaccination with cow-pox virus and early human removes from it, is described and figured in cases of old works and drawings as of a shape exactly the same as that of the vesicle, a circular form and a very decided umbilication or depression in centre. Its size, though not as great as that of the vesicle at its fullest development, sometimes, when the induced disease has been most perfectly and undisturbedly developed, very nearly approached it, and frequently of nearly two-thirds the size, in breadth and thickness of the vesicle which it represented. The color of the crust is described as of a rich dark brown, sometimes of a very dark mahogany or amber. The vesicle, as of a pearly or slightly bluish tint; the areola, of a bright rosy color; the depth and vividness of which varied somewhat with the

enough of Decanteleu's incomparable chart of vaccine cicatrices, to give some slight idea of the preciousness of the original. In this plate the heliotype process comes far short of the mark, but we agree with the Special Committee on Publication that the illustration will be acceptable and useful. The original chart* is one of rare value, and must be seen to be appreciated.

Dr. Decanteleu divides vaccine cicatrices into fifteen species; (p. 216 note) these drawings illustrate a perfect type of each species. In the original plate there are representations of over sixty more scars, but these are divided into groups, each group being varieties of one of the fifteen species.

To very many physicians who came into practice in the last twenty-five years, they will for the first time see in these drawings of Decanteleu, a genuine vaccine cicatrix, without, perhaps, they may have had some experience with the bovine virus. Many cicatrices may now be seen in communities which have shared the good fortune of being vaccinated with this "Martin virus," and more than once we have been called upon to explain why vaccine marks were so much larger and distinct now than in persons vaccinated years ago.

We now come to the statistical items in this report. Dr. Martin labored under the very great disadvantage in having no sources of statistical information, not even from the government could we obtain any information when we applied some months ago; therefore, he has been obliged to trust to his own observations, which have been larger perhaps, than that of any living person. "During the six years and nine months since I (Dr. M.) introduced animal vaccination, I have vaccinated and superintended the vaccination of 580 animals, besides some forty more in my early experiments. From these animals over 800,000 charged points, and an uncounted, but very large number of crusts and tubes of fluid lymph—many thousands—have been issued. This virus has been consumed by nearly 9,000 physicians whose names are on my register, besides a very large number whose names are not recorded." With all this experience Dr. Martin is entitled to speak with authority, and he informs us that the results of one re-vaccination as 73 per cent. of

*Tableau Analytique, Descriptif et Iconographique des Cicatrices de la Vaccine disposé dans sa partie descriptive suivant les principes de la méthode analytique de Lamarque, &c. Par J. L. B. Denarp Decanteleu, Docteur en médecine, &c.

success. Some of his correspondents reported as high as 90, 94 and 96 per cent. of success, which leaves room to doubt the correctness of the returns or to infer a miserable lot of primary vaccinations. "I feel sure," adds Dr. Martin, in conclusion under this head, "if one hundred people, thirty years old, who had been vaccinated but once, and in the first year of life, should be vaccinated with perfect vigorous bovine lymph, that almost every one of them would give more or less decided, generally very decided, vaccinal results. An adult vaccinated once and in infancy is almost sure to "take" when re-vaccinated with perfect virus. A person, twenty-five years old, first and well vaccinated at five years or upwards. Can hardly ever be re-vaccinated with a decided result."

The advantages of animal vaccination (1) is the induction of a far more perfect development of *vaccinia* than follows the use of virus of long-humanization. (2). The ability of renewing at will genuine vaccine by return to the animal. (3). That cutaneous diseases are not transmitted by this method. (4). That syphilitic infection is positively prevented. (5). That amounts of virus large enough to meet any demand can be obtained by proper effort, thus avoiding such a panic as occurred in England last year in consequence of the inability of the National Vaccine Institution ("by far the most efficient agent of Jennerian vaccination in existence") to furnish supplies. (6) That it permits the vaccine disease to be developed without interruption, by tapping the vesicle to obtain lymph. The most experienced vaccinists now holding with Jenner, that to be protective to the highest degree, a vesicle should be allowed to run its course entirely undisturbed. (7). The expensiveness of this virus is only an indication of the great care and outlay necessary in its production. (8). Entire immunity from erysipelas. (9). The large percentage of successful re-vaccinations produced from animal virus.

"How can animal vaccination be made more available to the profession and people of America?" is the pertinent enquiry with which Dr. Martin's valuable treatise ends, and it is a question that should meet with a practical solution at an early day. Our study and experience both lead us to the conclusion that it is by animal vaccination that the old time Jennerian prophylaxis is to be reestablished. But the production of virus in this way a large outlay in money is necessary, undivided attention to a disagreeable busi-

ness the year round is required, and the operator must have a friend of experience. We have known a successful operator of several years experience, to be on the verge of losing his stock by causes which the minutest attention seemed to be unable to avert. Animal virus is, therefore, necessarily expensive, and its perpetuation in unbroken succession a matter of some doubt in view of the very small fee paid for vaccination. It will only be produced so long as there is a profitable return to the operator.

Dr. Martin thinks there is but one plan which will ensure a supply in an unbroken succession, and that is by giving government encouragement to an institution which could be endorsed by the proper authorities.

How this could be done with propriety without causing a clamor from the establishments not rewarded with the authorization is the difficult point in the case; but without any special enactment it would seem but fair that to Dr. Henry A. Martin to whom the country is indebted for the introduction and cultivation of animal virus, and to whom every operator in the country is indebted, directly or indirectly, for gratuitous training in the business, should be recognized by the Department of War and the Interior as the author of the reform in vaccination practice in this country. It is an acknowledgment which could come with a very good grace from a government which protects her citizens in monopolies of inventions the best of which are insignificant as compared with the great blessing which the private means and individual exertions of an enthusiastic specialist has bestowed upon his country.

Virginia Medical Monthly for January, 1878, containing *The Transactions of the Medical Society of Virginia*, 1878.

The Virginia Medical Society for a few years past has adopted the plan of publishing their Transactions in one volume with the *Virginia Medical Monthly*, thereby enhancing the value of each publication.

The address by the President, Professor James L. Cabell, of the University of Virginia, is full of sound advice about the management of the State Board of Health, which is applicable to all similar struggling bodies.

In his remarks upon the duty of individual physicians to work

systematically and faithfully for the relief of suffering humanity and to rescue the profession from the disrepute into which it has fallen. He continues: "If it be incumbent on us to keep fully abreast of the latest discoveries in pathology and therapeutics for the benefit of those whose lives are confided to our care, it is equally our duty to communicate to our associates any and every contribution it may be in our power to make to the common stock of useful knowledge. To some extent this may be done by communications for the medical journals, or occasionally by more elaborate publications, all within the sphere of individual action; but, in my judgment, the physician who works exclusively by himself neglects a most important and efficient means of receiving and imparting knowledge.

* * * I hold it to be the duty of every loyal member of the profession to connect himself with the Medical Society of his State, to attend its meetings as often as practicable, and to make such contribution to its Transactions as circumstances will permit. Let no one seek to shirk this responsibility on the ground of lack of opportunity to find suitable material for such contributions. Practitioners in retired and rural districts contrasting their scanty opportunities with the rich harvest offered to those who have access to large hospitals, seem to consider that the necessities of a routine practice in the country preclude the possibility of such investigations as may lead to useful discussions. This is a fatal error. It has been well said, that 'whoever recognizes a fact, however insignificant it may appear to him, and reports the discovery, makes a valuable contribution to science.' Now, such facts are to be observed in private practice as well as in hospitals, in the country as well as in cities."

The other addresses and papers are "*The Study of Medicine*," by W. C. N. Randolph, M. D., Charlottesville; "*Report on Advances in Chemistry*," by M. G. Ellzey, Blacksburg, Va.; "*Reports on Advances in Obstetrics and Diseases of Women and Children*," by Robert J. Preston, M. D., Abingdon, Va.; "*Report on Advances in the Practice of Medicine*," by John S. Apperson, M. D., Town House, Va.; "*Advances in Hygiene and Public Health*," by L. S. Joynes, M. D., Richmond; "*Special Report on Poisoning by Custards and Ice Creams*," by J. S. Wellford, M. D., Richmond; "*Special Report on the Epidemic Zymotic Diseases of Animals*," by John R. Page, M. D., University of Virginia. In addition to this may be mentioned voluntary papers by Martin L. James, M,

D., on *Heart Clots: A Report of three Cases, &c., and the Etiology, Diagnosis, Prognosis and Treatment of Cardiac Thrombosis, &c.*; “*Bony Union of Fracture of the Neck of the Femur within the Capsule, &c.*” by William Selden, M. D., Norfolk, Va.; “*Iodoform as a Local Remedy.*” &c., by J. E. Chancellor, M. D., University of Virginia. Then follows the discussion of the regular subject—“*Instrumental Labor.*”

We cannot do more at present than to make this bare mention of the many valuable contributions contained in this volume, but hope to return to it in a future number. Suffice it to say our Virginia neighbors have set us an example of earnestness of purpose in the support of their society worthy of our emulation.

We are pretty sure that the early and handsome appearance of the Virginia Society's Transactions is due to the energy of the able Secretary, Dr. Landon B. Edwards, who is also able to accomplish the immense labor necessary to editing the *Virginia Medical Monthly*, and the details of a general practice. May his success be equal to his energy.

MEDICAL ANNOTATIONS.

INEQUALITIES IN THE LENGTHS OF THE LOWER LIMBS BEFORE AND AFTER FRACTURE OF THE FEMUR.

Dr. J. S. Wight has contributed a very interesting article, and one of great importance to physicians in a medico-legal point of view, to the *Medical Society of the County of Kings*.* The article bears the above caption, and is the sequel of an article on the same subject which appeared in the *Archives of Clinical Surgery*.† Dr. Wight's opinion deduced from the measurement of sixty persons was as follows:

“1. The lower limbs of the same person are not always of the same length.

“2. The greater number of the lower limbs, comparing the limbs of the same person, show a difference in length.

*Proceedings for February, 1878.

†February, 1878.

“ 3. The left lower limb is oftener longer than the right lower limb.

“ 4. About one person out of every five has lower limbs that measure the same length.

“ 5. The difference in length of normal lower limbs of the same person varies in different cases—from one-eighth of an inch to an inch.

“ 6. The measurements of the lower limbs of cadavers and skeletons confirm the above results.”

These results were brought in question, but as these cases have been scattered and cannot again be referred to, he produces a second table embracing forty-two patients, with their nativity, occupation, length of limbs in inches, and the differences in each limb. The second table of cases in the main confirmed the first.

“ The following conclusions (based on the 102 cases in all) of internal measurements of the lower limbs.”

“ I. In each of twenty-three cases the normal lower limbs were equal by measurement.

“ II. In each of seventy-nine cases the normal lower limbs were unequal by measurement.

“ III. The equal cases are to the unequal cases as 1:3 $\frac{10}{23}$.

“ IV. In twenty-seven cases the *right* lower limb was the longer.

“ V. In fifty-two cases the *left* lower limb was the longer.

“ VI. The difference in the length of the normal lower limbs of the same person varies from one-eighth of an inch to one inch. One case had a *left* lower limb one inch and three-eighths of an inch longer than the right limb; this belongs to my previous table. Another case had a *right* lower limb one inch and one-half of an inch longer than the left limb. * * *

“ VII. In twenty-six cases there was a difference in length of the lower limbs of one-half of an inch and more.

“ VIII. In nine cases there was a difference of more than one-half of an inch.

“ IX. In one hundred and two cases, *the average difference in length of lower limbs, is twenty-eight one hundreths of an inch—practically, one quarter of an inch.*”

It is not necessary to follow Dr. Wight through his analysis of femora examined and measured, as our summary would rather tend to confuse, and we must refer our readers to the article in question, and come to the practical question involved.

“ How often would we expect to meet a case in which the lower limb, after treatment of a fracture of its femur, would be longer than its associate? and he answers * * ‘*in the surgical practice of a large hospital we could only expect to find one case in which the lower limb, after fracture of its femur, was longer than the other, in a period of sixty years.*’

Dr. Frank H. Hamilton addressed Dr. Wight a letter in which he states that he has done him and science an injustice, as he had just found time to verify by actual observation the correctness of his

(Dr. W's.) statement, and that of Dr. W. C. Cox, of Philadelphia, that the femora of most adults are of unequal length.

Here are some of the conclusions arrived at:

1. The greater number of normal lower limbs are unequal in length. 2. The left lower limb is oftener longer than the right lower limb. 3. The probable average natural inequality of the lower limb is about one quarter of an inch—perhaps a little more than this. 4. The probable average accidental inequality of lower limbs, after good treatment of fracture of the femur is about three quarters of an inch. 5. There will be about one case in ten—or eleven—that will give lower limbs of equal length after the treatment of fracture of the femur. * * 6. A case of apparent lengthening of a limb after fracture may occur in the service of a large hospital in sixty years. 7. It is impossible for the surgeon to make lower limbs always of equal length after fracture of the femur. Any claims to that effect cannot be credited. 8. The only perfect standard of a lower limb of which the femur has been broken is the limb itself before injury. 9. So far as we now know, it is better to break the *left* than the right femur.”

The medical profession owes their thanks to Dr. Wight for working out this important lesson in the surgery of deformities. Now let the courts of law see to it that no injustice is done surgeons in suits for mal-practice in cases of shortened limbs, until this new chapter in science shall have had its purpose, weight and bearings.

PROFESSOR SEE ON THE ACTION OF IODIDE OF POTASSIUM IN ASTHMA.

1. The respiration becomes free in about two hours; and when it was administered some hours before the paroxysm the development of this is almost certainly prevented. The second paroxysm is suppressed with certainty. 2. The respiratory murmur can be heard in regions wherein it was suppressed. 3. Recent emphysema disappears, with the exaggerated sonority dependent upon it. 4. The râles cease to be sibilant, and become mucous, allowing of the penetration of air. 5. At the end of some hours the orthopnea and emphysema have given place to normal respiration, intermingled or not with disseminated mucous râles. 6. When the asthma is chronic with permanent emphysema, if the treatment be continued after the subsidence of the attack, not only do the paroxysms totally cease, but the emphysema and oppression habitual to the asthmatic entirely disappear, especially in dry asthma. In catarrhal asthma the catarrh may persist for a longer or shorter time after the dyspnea has disappeared. 7. When the asthma is due to valvular lesion of the heart, the effects produced are but slight; but when it is connected with degeneration or hypertrophy of the cardiac tissue itself, the iodide treatment leads to the disappearance of the dyspnoic element.

But before pronouncing on the existence of cardiac asthma, we should be aware of a fact that may easily give rise to error. This is, that in a great number of the subjects of asthma we may observe at the apex of the heart, and more rarely at the base, a very gentle but very evident systolic *Bruit de soufflé*, which may lead to the fear of the existence of valvular lesion. But this sound which seems to reside in the valves of the right side of the heart, entirely disappears, and that in some days, with the removal of the asthma by means of the iodide treatment.

Professor Sée's plan is to give a solution of the iodide containing an equivalent of about sixteen grains of the salt daily.—*Medical Times and Gazette*, from *Bulletin de l'Académie*.

“TENDON-REFLEX” AND LOCOMOTOR ATAXY.

The above rather awkward phrase is the term applied to a phenomenon long ago discovered by the school-boy, and now studied for its physiological and pathological import by Professor Erb, of Heidelberg and Professor Westphal, of Berlin. Dr. Grainger Stewart recently delivered a lecture on this phenomenon in the University of Edinburgh. (*Medical Times and Gazette*, February 2d, p. 107.) By sharply tapping on the ligamentum patellæ, while the foot is dangling down and knee bent, a quick jerking forward of the foot is produced, after an appreciable interval succeeding the tap. All parts of the tendon are not alike sensitive, and all persons are not sensitive to the same degree. Dr. Stewart arrives at the conclusion “by exclusion as well as by direct observation that the tendon is the starting point of the irritation; and as the structure is supplied with nerve-filaments, we can be at no loss to understand how the movements are brought about.”

This seems not to be a mere curious physiological phenomenon but has its pathological significance. Dr. Stewart agrees with Erb and Roger, “that in fully developed grey degeneration of the posterior columns of the cord the ‘tendon-reflex’ is lost.”

“But in a lecture published in Berlin in January, Westphal has raised the important question whether the ‘tendon-reflex’ does not disappear even before the development of the acknowledged symptoms of locomotor ataxia; and, whether, therefore, its absence or presence may enable us to pronounce positively as to the nature of some spinal cases otherwise obscure. In connection with neuralgic pains in the limbs, while atrophy of the optic nerves, and such-like conditions frequently, but not exclusively associated with locomotor ataxia, he has found the presence or absence of ‘tendon-reflex’ afford valuable indications as to the nature of particular cases.”

That Telephone Stethoscope.—A correspondent of the *Medical Times and Gazette* of the 2d of February, asks, why may not the

telephone be utilized, by bringing out audibly the abnormal sounds of the chest in such a way that a whole class may listen at one time, and not fatigue the patient by repeated painful examinations. Dr. William Bird promptly replies in the next number of the same Journal that he has tried the experiment, and has not yet succeeded and has many doubts about it.

We call this item to the attention of our readers because we are quite confident that some shrewd Yankee doctor has the very article hid away under his great coat, and will come smilingly into the lecture room of some metropolitan college to amuse the boys with what John Bull will puzzle his brain in vain to produce.

COLLECTANEA and CORRESPONDENCE.

A CURIOUS CASE OF TOBACCO POISONING.

To the Editors of the North Carolina Medical Journal:

I wish to call your attention to a case of tobacco poisoning which puzzled me no little, and the solution of it at last may serve to open the eyes of medical men to like possibilities.

An infant eight months old had been separated from its mother all day on the occasion of some public celebration, and left in charge of a negro nurse. Late in the evening the child was brought home and I was immediately summoned. I found her very pale and vomiting almost without cessation, even after the contents of the stomach had all been ejected. The pulse was extremely rapid, extremities bedewed with a cold sweat. It looked really alarming, and all the more so because the child left home in good condition. My first suspicion was poisoning, and by tobacco. But how could an infant not able even to crawl get tobacco? These thoughts all perplexed me, but still I could not but return every time after wandering away from my original suspicion to explain it by any other course than tobacco.

The nurse seemed as anxious to explain the matter as the parents were to inquire into it. Finally the ray of light came! The negro nurse was a snuff-dipper, and in order to quiet the child when it was hungry, chewed up some crackers and fed her with it, and in this way incorporated enough snuff with the food to produce the symptoms. This opinion was corroborated by a subsequent examination of the vomited matter. The child made a good recovery.

Yours truly,

J. R. L.

February, 1878.

ANTI-HERPETIC MERCURIAL LOTION.

℞

Hydrargyri B chloridi, gr jss.

Ammoniæ Muriatis, 3 ss.

Alcoholis, ʒ jv.

Aquæ Laur -Cerasi, 3 jv.

Dissolve the salts in alcohol and distilled water and add emulsion of bitter almonds to ʒ xvj. Use as a lotion in pityriasis, acute, chronic eczema and pruritus.—*l'Union Médicale*.

An Uncommon Cause of Death from Tracheotomy.—Dr. Richard C. Brandeis in a letter to the *Medical Press and Circular* records a singular cause of death in a case of tracheotomy. It being found necessary to tracheotomize one of his patients for œdema of the trachea and lungs. Chloroform was given and when slightly under the influence, the knife was plunged into the trachea. Dyspnœa set in violently, increasing as he cut the tracheal rings, five of which he divided. He introduced as soon as possible a hard rubber canula, but the patient was dead. A *post-mortem* revealed the fact that the incision had divided five of the rings of the trachea, but the knife instead of dividing the lining mucous membrane had separated it from the anterior and lateral walls, and the more he cut the more he pushed the membrane before him, and thus cut off the supply of air; the introduction of the tube merely capped the climax.

The important lesson to be drawn from this accident, is to secure a firm hold on the mucous membrane by plunging a tenaculum into the upper inter-cartilaginous membranes as soon as the trachea is exposed.

Adhesive Plaster in Pleurisy.—The employment of adhesive plaster in acute pleurisy, is among one of the most useful applications. The Philadelphia correspondent of the Boston Med. and Surg. Journal, of February 25th, says—that it is again gaining favor with some physicians of that city, and is used either by applying broad strips over the point of pleuritic inflammation, or better still by passing a broad strip completely around the chest, compelling the patient to carry on breathing by the diaphragm and abdominal muscles. Professor John B. Biddle mentions it in his *Materia Medica*. It is not to be understood that the application of the plaster excludes other treatment, but is only an auxiliary.

Vaccination Syphilis.—The *Lombardy Medical Gazette* of February 2d, records some cases of transmitted syphilis. Twenty-six children were vaccinated from the arm of an infant who appeared to be healthy in every respect. Twelve of the children soon exhib-

ited symptoms of syphilitic contamination, and it was greatly feared that many if not the whole of the remaining fourteen, might be similarly affected.—(*Medical Examiner*.) The Rivalta calamity seems not to have had a very salutary effect upon vaccination practice in Italy.

Threatened Poisoning of the Rhine.—Near the end of the past year the screw steamer "Schelde und Rhyin" having on board 656 casks of arsenic (arsenious acid), foundered in the Rhine near Engers. Great fear was entertained lest the poisonous cargo might be penetrated by the water, and destroy the lives of the animals and the inhabitants along the river below the place of the accident. The boat and cargo were raised with as little delay as possible, and only five of the casks were found to be damaged by water, none of them having lost any considerable portion of arsenic. The consequence of the collapse of all the casks and the mixture of their contents with the river would have been most disastrous.—*New Remedies*.

The vegetarians will hardly gain much comfort from the following statement: In monasteries where the monks are confined to vegetable diet, says Professor Gubler, the arteries are found greatly indurated at the early age of thirty-two.

OBITUARY.

FLEETWOOD CHURCHILL, M. D.

DR. FLEETWOOD CHURCHILL, died on the 31st of January, 70 years of age. He was well known in America by his "Theory and Practice of Midwifery," "The Diseases of Women," and "The Diseases of Children," which were in their day valued text books. His public and private life shed a lustre on the profession of Great Britain.

DR. LUNSFORD P. YANDELL.

DR. LUNSFORD P. YANDELL closed a long and useful life the 4th day of February last, at the advanced age of 73. He was in his early life a teacher of medicine in the Transylvania University, University of Louisville, and Memphis Medical College. He was ever busy with his pen, and for many years a leader of medical thought in the West, as Editor, Professor and President of the Kentucky State Medical Society.

JAMES BLUNDELL, M. D., F. R., C. P.

DR. JAMES BLUNDELL died January 15th, at the advanced age

of 87. He had been so long out of practice that the present busy generation of practitioners had nearly forgotten him. Not so with the older generation of practitioners on this side of the Atlantic, and especially in the Southern States. His opinion about the use of forceps has left its indelible impression upon many of our venerable confrères. "I do not like to see an elegant pair of forceps," says Dr. B., in his "Principles and Practice of Obstetrics, &c." "Let the instrument look like what it is, a formidable weapon." "*Arte non vi* may be usefully engraved upon one blade, *Cave perineo* on the other." He had a just conception of the value of transfusion, and believed that after it had gone through its many stages of ridicule and neglect it would finally be adopted.

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

Messrs. Wm. R. Warner & Co., Manufacturing Chemists, &c., Philadelphia, Pa.—Gentlemen :—The Phosphorous Pills submitted to me for Chemical Analysis and Microscopic Examination afford only traces of Phosphoric Acid, and contain the one-twenty-fifth of a grain (gr. 1-25) of the element in each pill, as expressed upon the label; they do not exhibit particles of undivided Phosphorous, the mass being perfectly homogeneous in composition, soft in consistence, and thoroughly protected by the non-porous coating of sugar, from the oxidizing influence of the air. Each Pill is an example of what skill, care and elegant Pharmacy can do.—I regard them as a marvel of perfection.—A. E. McLean, Analytical Chemist and Microscopist, 40 and 42 Broadway, N. Y., late of Gardner & Ainstie's Laboratory, Edinburgh, Scotland.

Warner's Pills, as we know from the samples sent us, are all that can be desired. They are far superior to any we have seen.

Advertiser's Exhibition at Goldsborough.—Several advertisers have signified their intention of exhibiting articles advertised by them, at the meeting of the State Medical Society, and we ask their attention to the following directions :

All packages must reach Goldsborough, N. C., by the 10th day of


May. If exhibitors do not accompany the goods they should be directed to DEROSSET & WOOD, care of Messrs. Kirby & Hill, Goldsborough, N. C. This exhibition was devised by us to enable our advertising patrons to bring their products directly to the attention of the purchasers, and to enable the physicians of our State, who are seldom able to go away from home, to inspect the elegant pharmaceutical preparations, surgical devices, surgical dressings, &c., &c., which lend so much to the successful treatment of their patients.

American Wines.—The traditional respect paid by all good Americans to wine supposed to be genuine and bearing some remarkable name on the label has gone about far enough, and it is now time that common sense was being exercised in regard to wines or any other products. The PORT GRAPE WINE produced by MR. SPEERS, of *Passaic, New Jersey*, made from the Oporto grape, is far superior to the factitious Cetto and other commercial wines, having good body, fine flavor, freedom from acidity, and sufficient astringency. Mr. Speers' success should stimulate the wine-makers of Eastern Carolina to a more careful study of the growth of the vine, and of the details of the management of their wine. What a wine-grower in New Jersey can do ought to be within the reach of Carolina farmers, with the advantage of climate on their side.

The Galvano-Faradic Manufacturing Company will have some of their instruments on exhibition at the next meeting of the State Medical Society, that their merits may be thoroughly tested.

Send to H. H. Burrington, Providence, R. I., for a pamphlet describing his *Uterine Elevator*.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, }
 SECRETARY'S OFFICE, }
 LITTLETON, N. C., January 30th, 1878. }

 *The Meeting of this Society will take place in Goldsborough on Tuesday, the 14th of May, 1878.*

It is earnestly desired that members of this Society having papers to read, will announce the title in the March, April and May numbers of the NORTH CAROLINA MEDICAL JOURNAL. A full and free discussion of papers can best be accomplished by such preparation. Notice sent to the NORTH CAROLINA MEDICAL JOURNAL will be promptly attended to, as I have made this arrangement with the Editors: of course, due consideration will be given to papers not so announced. It is hoped too, that early preparation will be made to make this the fullest and best meeting of the Society. Arrangements by the Goldsborough Committee will be announced in due time.

L. J. PICOT, M. D., Secretary.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

Number 4. Wilmington, April, 1878. Vol. 1.

ORIGINAL COMMUNICATIONS.

THE SOURCES OF CONTAGIUM IN TOWNS AND RURAL DISTRICTS.

BY M. J. DeROSSET, M. D., 15 West 26th Street, New York.

The light which has been shed upon the origin of the contagium of the various zymotic affections has come mainly from researches conducted in densely populated cities where the *apparent* conditions are so diverse from those which obtain in rural districts that the application of the same conclusions to both are not always obvious. The well-paved streets, the abundant water service, the system of sewers and the contiguously built dwellings of cities are features so unlike the economical arrangement of country towns and farm sites that in their relation to the genesis of disease-germs the two may readily be supposed to have nothing in common. The possibility of excluding with great approach to certainty, almost every other condition which could favor infection in populous communities, has enabled sanitarians to trace its origin to sewer emanations and mephitic house-air. There is scarcely any difference of opinion as to this, among intelligent men, and without holding it

necessary to say, what is the physical nature or power of a specific poison, whether it is gaseous or solid, all are agreed that it cannot enter or exist in any dwelling except where aided by defects, which close inspection will not fail to reveal, in the water pipes, sewers or drains. But this knowledge—and knowledge it is, because so definite and assured as to be more than theory—affords no explanation of the occurrence, for instance, of diphtheria sporadically or in epidemic form, in villages and isolated country dwellings. In these its insidious approach, its characteristic features and its large mortality in no wise distinguish it from the diphtheria of the great cities. It traverses large extents of rural territory, invades towns, villages, hamlets, cottages, discriminating but little between poor and rich, and without always furnishing in its march a satisfactory evidence of direct transference through individual contact. Indeed, instances may be cited, *ad libitum* of its existence in places, to which it is certain it was not communicated through personal means, and where its local origin is without dispute. In these the favoring conditions are certainly not in drains and sewers, but in other agencies capable of giving rise to the same pernicious developments, and which like the first are fortunately remediable under proper sanitary direction.

What these circumstances are, has doubtless been a source of perplexing thought to many a country practitioner who in vain efforts has tried to explain the existence of zymotic diseases around him upon the theories so lucidly set forth by those whose observations have been made in the great cities. Unfortunately the country practitioner is too prone to look to his city brethren for solution of problems of which, in many instances, the factors lie in most available profusion close to his own hand.

Before attempting to point out the sources of diphtheria (and, indeed, of any of the contagious and infectious diseases, for *ex una disce omnes*) among country populations, it will facilitate our purpose to review the general principles which underlie the genius of morbid germs; for our inquiry is based upon the theory of the reception of such germs from without, ignoring wholly, the as yet, untenable notion of Dr. Richardson, of their originating *de novo* within the body through pernicious glandular action.

As our object is to give a practical cast to this paper it would be unprofitable to digress into the much mooted inquiry whether a

given specific germ can possibly issue out of any conditions or environment without the previous introduction of elemental forms, whose life history leads naturally to the birth of other germs of identical form and properties.

Such a question is not susceptible of a definite answer at this stage of our knowledge. It is strictly parallel with that involved in the controversy, between the Tyndal and Pasteur school, representing one opinion, and Bastian and his followers another, as to the abiogenesis of living particles (bacteria, &c.,) in sterilized fluids. It is also closely connected with the question of the origin of life itself upon this globe, and like it opens up an infinite vista of possibilities the remotest of which recedes *pari passu* with our seeming approach towards the end. For if, to cut the Gordian knot of the difficulty, we admit the advent of the simplest form of life upon our earth as due to their meteoric transference hither from some other planetary body, the inquiry will not end here, but will only be transferred thither, and the entire cosmic condition shown to have been originally such that life must have been nowhere possible under the thermal necessities of the nebular and earlier periods. The origin, therefore, of primal living forms, and the advent of contagium germs may be left to the evolutionists and others to whom the speculation rightly belongs, and in tracing up the sources of contagium, our work is not to deal with its first origin but solely with the essential causes of its multiplication.

All living organisms whatever, from the most complex to the simplest, require, probably for their existence and certainly for their generic reproduction, the presence and actual contact of atmospheric air and water. In the case of the simplest forms, as contagium germs, and many of them may be so occult as to be known only through their effects, their continuance and increase involves a location, a habitat, known as their *medium* or *nidus*. This medium or nidus must contain or consist of organic matter, of animal or vegetable origin, be moist and supplied to a liberal extent, at least at the outset of the process, with some air. Now a given germ being introduced into or upon such nidus or medium, under a favoring temperature enters immediately upon a process of multiplication, reproducing itself indefinitely, as long as its environment furnishes the pabulum thereto. When the supply of organic food or moisture ceases the reproductive process is interrupted, though

probably the germs then existing continue to live for some time in a passive state, awaiting a supply of fresh material, or their own transference to new habitats.

If the contact of atmospheric air or oxygen is very free and if it permeates all parts of the medium a new and wholly different process is set up, one of oxidation which results in the distribution of the germs and the sterilization of the medium. Various other agencies will render the medium sterile, such as an elevated temperature which destroys the germs, and certain chemical substances (antiseptics, anti-zymotics, disinfectants) some of which act through germinal destruction, and others only through suspension of the reproductive power. The conveyance of germs from one point to another is effected probably, in three ways: (1.) *en masse*, by transportation of infected substances; (2.) by streams or currents of water; (3.) through atmospheric diffusion. The possibility of conveyance by all of these methods is indisputable, and it is obvious that the first two may be hindered, perhaps absolutely, by sanitary regulation; but the third, which I consider the chief agency whereby diseases are spread between distant points, is far less under our control. We cannot tell in which direction or to what distance the diffusion of contagium germs will take place, since the ever varying currents of air and the shifting winds are incalculable elements in the estimate. Nor can we adjust with accuracy the opposing values of forests, bodies of water or topographical features generally, though it is more than probable that they all have some relation to the progress of infection.

I believe, however, that whatever the distance to which contagium particles are conveyed, they move in cloud-masses, invisible truly, but nevertheless distinct and segregate, quite analogous to the passage of nebulous masses of minute insects, which the wind bloweth whither it will.

For if particles were transferred simply the destructive power of the atmosphere would limit their life to minute ranges, but in a great mass, a sufficient number may survive to traverse long distances, and inaugurate new points of infection. In no other way does it seem possible to account for epidemics passing between distant points, leaving intervening territory uninvaded—the other modes of conveyance, of course, being excluded. And the hypothesis of germ-clouds is not far-fetched, but is in perfect analogy

with the existence of moving masses or bodies of condensed air, which every one concedes now that they have been demonstrated by Professors Henry and Tyndal in their experiments on the propagation of sound. Having made clear in this brief sketch the scheme involved in the reproduction of contagium germs, and the methods of the diffusion and conveyance to remote points, it is unnecessary to occupy ourselves with the question of the originating *de novo* in new localities, only admit the possibility of their transference and it will require no effort of the mind to see that the sanitary environment of most of our urban dwellings and rural homes is such as to furnish a ready and prolific nidus for their propagation. Remember that the presence of stagnant (slowly changing) air, moisture and organic matter, particularly of an excrementitious nature, constitutes the sole essential conditions. Can there be any doubt that these exist abundantly in every part of this country? As yet sanitation and sanitary engineering have but little recognition in the political economies of our states and cities, the construction of public buildings is conducted with a total disregard to hygienic laws, and even in selecting locations, no sufficient attention is paid to the conditions of aspect, shelter and water of the soil which have such an intimate bearing upon the temperature and salubrity of the edifice.

If this is to be said of the public structures what may we not say of the slovenly manner in which the most of our rural houses are located and built. No matter how fair the house unless its surroundings are salubrious "he that buildeth it," says Lord Bacon, "committeth himself to prison."

We will only point to the unpleasant picture of the features which too often surround us:—how defective the sub-soil drainage; how small provision is made for carrying off the surface water; how waste and kitchen refuse are allowed to accumulate about the premises; how damp and dusty are the stables, barn yards, piggeries; how imperfect the water supply; how dangerously located the privy, sending its surface washings or emptying its cess-pool into well or spring! Preventive medicine is now reaching a higher place than medication, and if we only look around us we shall find a new and more profitable field for our labor in that direction. It is true our advice is not often sought in the location and domestic arrangements of the family home, but the obligation is no less

binding upon us as physicians to make known the sanitary defects as they exist.

The whole question is one of drainage and removal of waste, for if moisture and organic matter be permitted to accumulate they inevitably furnish conditions for the breeding of contagion.

The first thing to be considered in reference to the prevention of moisture is the existence of shade trees which prevent the access of the sun's rays at all periods of the day. It is safe to say that that side of any dwelling is the least salubrious which receives the least amount of sunlight, and dense foliage, therefore, should not be allowed to stand as a permanent shelter against the sun. The direction of prevalent winds is a matter of no little moment, laden as they may be, with the miasm of neighboring sloughs and marshes. And that marsh air contains visible floating germs which are the sources of diseases is sufficiently attested by the experiments of the Italian savans in the Campagna.

The declivity and nature of the soil are to be considered in estimating the provisions for removing the rainfall, and for the general surface and sub-soil drainage. If the soil is light and porous, moisture soon sinks into it and seeks the subterranean water courses, but if it is compact and impervious it will hold moisture, which, if not remedied by judicious system of open ditches or better sub-soil pipes, will inevitably favor the propagation of disease-germs, besides affecting the temperature and hygrometric condition of the house.

The surface water should find easy method of escape, not being allowed to collect in pools, and the dripping roofs, those abominations of country houses which more than is suspected, are a fertile source of ill health, should not be suffered to maintain their circle of puddles beneath the eaves, but provided with leaders and gutters should be made to conduct the roof water into the general cistern or principal drain. Turning next from these natural features let us examine into the more important matter of the disposition of chamber slops, wash water and kitchen waste.

These consist largely of nitrogenous and oleaginous substances, capable of undergoing changes of the most pernicious character, And yet it is not very common (through ignorance, and not laziness or indifference, let us hope) for heads of families to allow this refuse to be dumped in close proximity with the dwelling ?

Even the traditional tin basin of the back porch has its share of potency in contributing to the unsanitary condition, being carelessly emptied over the rail, and itself unless frequently washed and sunned, smelling of decay from the putrid accretions which cling to its sides.

Doubtless it is within the power of every one who reads this paper to recall the soapy pools which characterize the back premises of town and country dwellings. Year after year as the habit is continued, the soil becomes saturated with putrescible substances, the ground air and moisture furnishing the complement for breeding from any stray germs that a hostile urine may bring within the area of their combined influence; and some fine morning the practitioner, sealing his eyes to the evidence around him, wonders where under God's heaven this case of diphtheria came from. All waste whatever, whether of a liquid or solid nature should be diligently excluded from finding a receptacle in the soil within a long distance of the dwelling. It ought to be conveyed daily to be thrown where the natural configuration of the ground, will aid its disappearance in a safe direction. It will do no damage if cast widely over the surface of the garden plot sufficiently remote from the dwelling, and will largely increase its fertility.

Should the means of the house-holder enable him to construct a receptacle and drains for its removal, they ought to be made of earthenware pipes (not of open brick work) neither too large nor too small for the volume of waste to be conveyed, inclining not less than four inches in thirty feet, and terminating in a distant cess-pool, or as Mr. George Waring recommends, by a system of open pointed and perforated pipes beneath the surface of a field or plot of ground, for fertilizing purposes. The expense of this latter method will be more than compensated for by the increased yield of grain or garden product in one season.

The construction of drains involves also the provision of methods for their periodical flushing and disinfection, for they may become the breeders of disease through putrefaction of the organic matters which adhere to their interior. An elevated cistern or tank of several barrels capacity, filled from the roof by leaders or from the general cistern or well by a pump, supplies the means of flushing, and will thoroughly cleanse the drains provided they are not too large.

But there remains yet the most important matter of all in reference to the sanitary condition—the water supplies and privies. Our town and country vicinages ordinarily depend upon artificial cisterns, wells, or natural springs for their water supply, and these may each be a source of any of the infectious diseases. Cisterns gather water from unclean housetops, the leaders of which through faulty construction often hold putrid pools, occasionally no means of filtration is provided, and the cistern itself is often foul from neglect or through penetration of insects and burrowing animals. Wells and springs drain more or less great areas of territory, receiving the washings of refuse from around dwellings, or putrid spots in the soil, and from the cess-pools or vaults beneath those temples we raise to Cloaca. What a suggestive feature, by the way, they add to the landscapes when in the roseate morn, the dew trembles upon the leaf of the honey-suckle whose foliage and whose flowers scarce cover the disgrace or stifle the odors with their sweet incense ! What extent or area of territory a spring or well will drain, depends upon a variety of circumstances—its location, the topographical features and the density of the soil.

In a bright town in New Jersey, where the soil is clayey and sufficiently compact, the existence of disease was directly traced to a well located 60 feet from the privy vault. In loose soils, such as exist in the upper strata around Wilmington, N. C., it is possible for contamination to ensue even at greater distances than that; and yet how often do we find the privy and well within ten feet of each other. If the well is deep penetrating through the clay or rock strata, it is probable that the water enters it from long distances, and the danger of poisoning is much less. But all wells are liable to be injured by washings from the surface, and by the falling in or burrowing of reptiles, toads, frogs, moles, snails, and insects which die and become putrid with the inevitable result of rendering the water unwholesome. For this reason wells should have tight brick or stone walls, cemented, and it were better to arch them over far beneath the surface of the ground, leaving only a small opening through which the pipe passes to the pump, itself to be tightly closed around the pipe, and afterwards the excavation to be filled in over the arch. Constructed in this way wells never require cleaning, and remain permanently sweet.

A good, deep drive-well is also free from the liability to be in-

jured by surface filth or insects. For locating and constructing privies, the indications have been sufficiently pointed out. No objection exists to placing them contiguous to or even within a dwelling if provision is made for the *daily* removal and cleansing of the receptacles—but *under no circumstances should they be made to receive slops and waste water.* All cess-pools and vaults should be forbidden by law—for they inevitably poison the soil by filtration, or the atmosphere by the gaseous emanations from their festering contents. The use of dry earth as a deodorant will on account of the slight trouble it entails never be widely adopted, although in the country this is reduced to a minimum, and would amply pay in the fertilizing value returned.

The general principle is to keep all waste and excrement moving, never allowing any thing to remain standing, or if properly pursued may without difficulty be made to assume a most important economical relation to farm production.

Finally, the barn-yard, stables and piggeries must not be forgotten as a frequent and potent source of contagium. My mind turns incidentally here to a prominent garden and dairy farm within view of the church spires of Wilmington, whose barn yard may be seen from the public highway to be fetlock deep in manure and wet filth. A few steps off stands the well, an open arrangement with a windlass, and within the sound of a whispered word the neat vine covered dwelling shelters its inmates, but not against the contagium which sooner or later must start on its death-dealing journey from their door. Is the picture a rare one?

The subject is not exhausted as the limit of the magazine article is. I have only aimed to point out the pernicious influences which surround too many of the provincial homes and town residences in the country. Every reader of this knows that the description is not overdrawn, and it must be clear to all that the evil is not wholly unremediable. It is the duty of legislatures to make the necessary provision in money, to enable the health boards to discriminate the knowledge which is required in dealing with unhealthy locations and conditions, natural or artificial, and subsequently to grant to the health boards authority to secure a thorough observance of the sanitary regulations.

In the meantime the profession is not without power, through careful inspection and in its personal influence and counsel to meet cases, and so to contribute largely towards stamping out the filth diseases.

A NEW AND REFINED METHOD OF EXAMINING THE PULSE.

BY OCTAVIUS A. WHITE, M. D., New York.

Physiological literature abounds with antagonisms relating to the arterial pulse. In searching its annals, proof is everywhere found of the reluctance with which each important point respecting this *Res fallacissima* of Celsus has been conceded.

The period is quite recent where the *tactus eruditus* was alone relied upon to interrogate the pulse and determine the degree of abnormal heat present in cases of critical moment. When we compare observations thus devised with those now so carefully attained with instruments of precision, we indeed felicitate ourselves upon the superior working hypothesis upon which treatment can be based at the present day.

The strong feeling of a want in physiological research has led to the invention of instruments of nice precision for critically exploring the circulation of the blood—instruments which not alone exhibit and analyze the various features of the pulse, but absolutely measure and transcribe them in bold and legible characters.

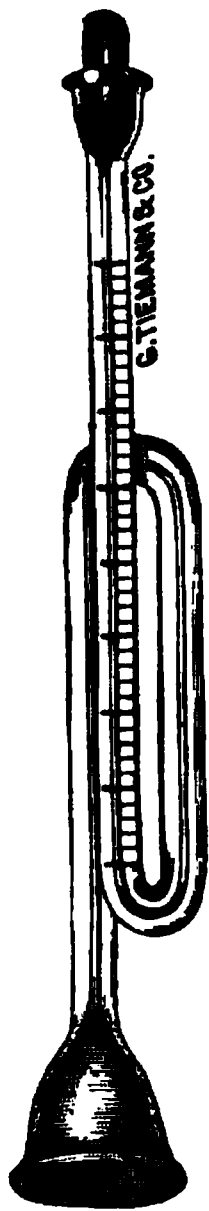
Marey's sphygmograph, and more recently that improved device of Dr. Pond, have been justly pronounced valuable auxiliaries in physical diagnosis; but it must be evident to all familiar with their use, that, the delicate pulse qualities and quantities, which they aim only to magnify and display, undergo through their highly elastic springs and membranes a certain degree of distortion, and further, that the number of vibrations transmitted and described by such agencies cannot fail to be multiplied by rebound.

Experience has fully convinced me that it is quite impracticable to obtain with their aid a pulse impression which shall be free in any respect of characters incident to their peculiar mechanism. It can be laid down as a maxim that in direct proportion with complexities about the means employed to obtain observations upon a given pulse must be the indifferent quality of the result.

It was in consequence of these independent views that I some time since devised and suggested the employment of a substitute totally devoid of either spring or membrane, by which the delicate characters of a pulse wave could be revealed to the sight. On account

of the comparatively wide range of application and the novelty of this device I named it a HÆMARUMASCOPE.*

This particular manometer, already so fully described† and of which the annexed is a faithful delineation, can truly exhibit the well-known percussion wave, note the velocity and define the force and degree of regularity about respective parts of each blood movement, taking place within the calibre of arteries. With its assistance we can ascertain the amount of peripheral resistance and oscillatory expansion occurring in the various avenues of the circulation and also test the degree of facility or embarrassments with which the blood traverses the net work of the capillary system.



In the normal pulse, coördinate as to time, rythm, frequency and volume, the register is seen to rise and fall, not abruptly or in haste, but with a steady, uniform and tranquil measure. In instances of high arterial pressure when the vessels remain full and tense, even during diastole, the effect upon the artery, as shown by this instrument, is remarkably characteristic of the degree of oppression the vascular system is suffering.

In certain instances the systole is represented as a labored act and occupying an appreciable interval of time. In another class of cases the contraction at the heart is shown to be sudden, swift and uncompleted, while diastolic action proves comparatively feeble in character.

The shock wave, which is indicated, with an ordinary sphygmograph, by a direct upward toss of its lever, is expressed by the hæmarumascope, with a bold and sudden shooting upward of the colored fluid drop within its shaft. When well developed and represented, this feature is naturally followed by a series of perceptible undulations about the register, varying directly with the character and force of the pulse.

In a remarkable case of chronic emphysema in which the pulse was small, weak and irregular, while the heart beat was so violent as to shake the patient in his bed, the hæmarumascope represented alternately two distinct pulse characters, one slow and deliberate

* *Αἷμα*, blood; *ρυαα*, stream; *σκοπεῖν*, to show.

† Vide The American Journal of the Medical Sciences, July, 1877.

for two or three beats ; the other receding three or four rapid, jerking and indistinct pulsations.

The experienced and discriminating Forget has asserted that contraction and insufficiency of the cardiac orifices are less positive causes of abnormal sound than is generally supposed. In aortic regurgitation, which is known to be a most frequent form of valvular disease, the defect has not unseldom escaped recognition, while hypertrophy of the left ventricle became apparent through embarrassment of the pulmonary circulation ; or seen until mitral incompetency, permitting conspicuous regurgitation at commencement of systole, is reached. Under these circumstances, the hæmascopes can easily detect the systole and so hasten an early solution of the case.

Any competent observer, therefore, proficient in the use of this instrument, and who fully realizes that each movement transpires about the fluid within the shafts represents a sphygmie fact, can distinguish at leisure any irregularity about the circulation, and be ready to interpret a departure from a normal pulse wave in accordance with the truthful revelations.

With this addition of another appliance for the perfection of physical diagnosis, may we not with confidence indulge the hope that the timely recognition of obscure affections of the heart will be speedily ensured ; that the variances among men of science respecting functional and organic diseases must finally cease and above all that anxious patients shall be spared a painful suspense, wavering between hope inspired by one medical examiner and despair impressed by another.

222 Second Avenue.

PROBABLE DUALITY OF GONORRHOEAL VIRUS—WRIST-DROP FROM ALCOHOLISM.

By J. R. L., M. D.

It was first clearly pointed out by Hunter, that gonorrhœa and syphilis were not produced by the same virus—that they were distinct diseases. Since that time floods of light have been thrown

upon the study of venereal diseases, and especially since Mr. Jonathan Hutchinson has studied them so carefully and recorded his experience in such a graphic and lucid manner.

Succeeding the discovery of the non-identity of gonorrhœal and syphilitic virus, came the discovery by Bassereau, as recently as 1853, of the duality of syphilitic virus, a theory which has gained ground everywhere since, and is now in a more or less modified form almost universally adopted in this country, perhaps by all but one leading syphilographer. This theory, substantiated as it has been by extensive and sufficient clinical observation, has resulted in practical benefits, leading as it has done to a more successful treatment of syphilis.

The first writer to my knowledge who promulgated the duality of gonorrhœal virus, was Professor W. A. Hammond, of New York, but I cannot recall his theory. The purpose of this paper is to incite inquiry, to set others to thinking in order that the truth or falsity of the theory of the duality of gonorrhœal virus may be established.

Every practitioner has had perplexity in the treatment of gonorrhœa, some cases yielding to local treatment, and readily, in a few days; others yielding as easily by internal remedies; some getting well spontaneously, while others have resisted the conjoined influence of local and constitutional remedies and strict diet. Even taking into account the irregular habits of most patients who apply to us for treatment for gonorrhœa, the failure of treatment depends more upon an early and proper diagnosis than at first sight seems the case.

Several years ago, chordée was a very frequent accompaniment of this disease; now, (it is my experience) it is very rare. I think I can never more forcibly bring to your attention the points I wish to make, by giving you an account of some cases, which show either different degrees of intensity or difference in the virus with which the patients were affected.

H. G. E., aged about 25, called me to treat him for orchitis. I found him suffering severe pain. He had had a profuse gonorrhœal discharge which had almost subsided upon the attack in his testicles. I treated him merely by suspension of the testicles, rest in the recumbent posture, lead lotion, and opiates. The subsidence of the pain and the swelling were so considerable, that at my next visit, I

considered that the patient required no further treatment. I was summoned, however, in a few days to him, and found him suffering with acute articular rheumatism of both knees, which, treated with alkalies lasted him six weeks.

W. A., aged about 23, sanguine temperament, consulted me for gonorrhœa, which I treated simply with diuretics, and urethral injection. I made only one prescription, when the patient returned complaining of intense pain in his joints, and from that time he had a severe case of acute articular rheumatism lasting ten weeks. The gonorrhœal discharge entirely subsided with the appearance of the rheumatism.

Another case. Two gentlemen consulted me about the same time for a discharge, which was thin and yellowish, staining the shirt perceptibly, but attended with little scalding. One had cohabited with a married woman, the other with his mistress. The patients had no suspicion of the impurity of either of them. But as medical men are, and of right ought to be skeptical, and recollect the proverbial mendacity of such patients, I treated these cases with simple injection of sulphate zinc and tannin. In a few days they were well. One of the party named who had a mistress, subjected himself again to the contagion, and had a resulting discharge as formerly. I made a close vaginal examination several times, of this woman, but found only a leucorrhœal discharge which I treated, and for the third time, after I had pronounced his mistress well, the gentleman contracted another discharge from the urethra.

Now there was a marked difference in the character of these cases, commencing with the initial discharge. In the first two, there was a creamy yellowish discharge and the peculiar odor; it was very abundant, and the scalding intense. The discharge subsiding immediately upon the establishment of orchitis, not an unusual course, and the gonorrhœal rheumatism following the subsidence of the inflammation of the testicle. The first urethritis yielding to a simple injection of an astringent solution, the second going on to inflammation of the testicles and joints, and running the usual course of rheumatic fever.

It may be argued that the intercurrent rheumatic affection in one case had no relation to the gonorrhœa, but was caused by influences entirely extraneous. Here were too cases though in which the symptoms were carefully noted, and in which the results were iden-

tical. But in the milder cases of gonorrhoea there was no scalding, but a thin inodorous discharge, and no constitutional symptoms.

I commenced the treatment of gonorrhoea in my early practice, with the greatest confidence in specific remedies and with the belief that there was no difference in them. But I have since come to the conclusion that in the more severe variety of gonorrhoea—the inflammatory form—that stricture is more apt to result; that mere local treatment is not sufficient, and that its course is very intractable. I am not satisfied that any sure differential diagnosis can be made, but I think as the cases occurring in the practice of most physicians are reviewed, they will agree with me that there is some reason to believe in the duality of gonorrhoeal virus.

Non-specific urethritis yields readily to local treatment of a few days, while specific urethritis can only be cured by a lengthy course. It is useful to be able to make a prognosis for venereal patients, as their whole concern seems to be as to the duration of their disease. This way of dosing every patient with copaiba at the first sign of a discharge is enough to deter every patient from incurring the risk of infection, and needs re-consideration at the hands of the profession, but not for that reason alone.

I have noticed that there is always some febrile excitement in severe cases of gonorrhoea, with a tendency to priapism and muscular soreness, and hyperæmia of the conjunctiva; and while it is beyond doubt a fact that gonorrhoeal ophthalmia is produced by the inoculation of the virus in *most* cases, I have had a suspicion for some time that conjunctivitis in some gonorrhoeal patients was not due to inoculation. If gonorrhoeal ophthalmia attacked only those patients who were personally filthy, it would bear out the established theory, but such is not the invariable rule. In fact we have purulent ophthalmia, the Egyptian variety for instance, which becomes sometimes a wide-spread epidemic, but which must have a starting point in some cause quite independent of contagium. All I insist on is this, that there are some forms of gonorrhoea which independently of inoculation, have a predisposition to conjunctivitis, but which fortunately stop short of destructive inflammation, while on the other hand, some cases are so asthenic, that it hardly occurs to the physician to warn against inoculation.

WRIST-DROP FROM ALCOHOLISM.

My attention has been called lately to two cases of wrist-drop,

occurring at long intervals in my practice, illustrating, as I believe, an undescribed phenomenon in alcoholism.

Case 1.—W., a clerk, aged 21, consulted me in the summer of 1871, for wrist-drop. He had for some months been a hard drinker. His appetite was poor and whimsical, his tongue constantly coated, sleep disturbed by unpleasant dreams; sometimes there was insomnia. The palsy was of the left hand, which could not be raised on a line with the level of the arm; extensor paralysis, in other words, was complete. The patient's history of the trouble was, that he had slept on his wrist, and on awaking in the morning the paralysis was as I saw it. I sought for the cause in ale-drinking, suspecting that perhaps it was lead poisoning, from the lead-pipes used to convey the ale from the cask to the counter. The evidence was not sufficient to justify this conclusion. The patient rarely drank ale, and never soon in the morning the most opportune time for getting a dose of lead, that is, before it had been washed out or much diluted by a free current of ale. There had been no lead colic, and there were no blue lines on the margins of the gums, nor any of the signs of lead-poisoning. Shortly after the patient was confined to his bed by a prolonged and excessive debauch, having congestion of chylopoetic viscera, terminating in a large hemorrhage from the stomach. No treatment other than that to relieve the nervous and gastric symptoms was adopted, and the wrist-drop disappeared with convalescence, and the elimination of alcohol. The patient has been since that time in perfect use of his wrist.

Case 2.—C., a painter by trade, consulted me in November for wrist-drop. He had at the time a strongly alcoholic breath, being in that bewildered and nervous condition following a long debauch. He had eaten nothing for some time, but only complained that he had no power of control over the wrist. There was complete paralysis of the extensor muscles. In this case there was more reason to suspect lead-poisoning. The patient had never had lead colic, and did not have at my examinations any of the symptoms of lead poisoning, except the suspicious wrist-drop. There were strong reasons besides these against the theory of lead poisoning. The paralysis was not symmetrical, but confined to one wrist.

It yielded in five or six days to a solution of bromide and iodide of potassium, but I think it very likely that it would have disappeared upon the elimination of the exciting cause—the alcohol,

without treatment. A subsequent debauch, but of shorter duration produced similar symptoms in the patient named above. His wrist-drop occurring only after a long and excessive drinking bout.

N., another patient, taking down with partial paralysis of locomotion, was attacked at the same time with wrist-drop which lasted twelve months. In this case the extensor paralysis of the wrist was complete. There was no indication of lead poisoning after thorough examination, nor did the nature of the patient's occupation lead to the suspicion. After confinement to bed for many months, and going through many phases of cerebral disturbance, with loss of memory verging on imbecility, with œdema of the feet and legs,—as convalescence was established, restoration from paralysis was so complete that the patient now writes with his usual grace. Total abstinence has cured this patient entirely.

SELECTED PAPERS.

THE AMERICAN MOUNTAIN SANITARIUM FOR CONSUMPTION, AT ASHEVILLE, N. C.

BY STANFORD E. CHAILLÉ, A. M., M. D.

Professor of Physiology and Pathological Anatomy, Medical Department, University of Louisiana.

[*From Advanced Sheets from the Author.*]

Although familiar with the caprices of fashion in medical as in other matters, and with the fact that this baneful influence has been often and sadly illustrated, in the history of the diverse resorts commended for consumptives, I, none the less, have for years advocated mountain resorts as justifying the best hope for arresting incipient consumption, and did present reasons for the faith that was in me in the May No., 1876, of the *N. O. Med. and Surg. Journal*. in an article entitled "The Climatotherapy of, and the American Mountain Sanitarium for Consumption." Continued interest in this subject has stimulated me to gather a little additional knowledge, not only from the testimony of others, but also by personal

observation ; and I propose to now present some of the evidence which has during the past two years, attracted my attention; and served to strengthen my conviction of the beneficial influence in consumption of mountain resorts, and especially of the Mountain Sanitarium at Asheville, in western North Carolina.

While the literature of the subject has, since my last article was prepared, greatly increased, and while some of the authors are not advocates for mountain resorts,—yet, I have seen no testimony impugning the capital facts ; first, that nearly all of the localities which enjoy an immunity from consumption are in the mountains ; and second, that mountain resorts thus located do yield strikingly favorable results in arresting the disease, prior to the destruction of the lungs by softenings and excavations. True, some of the writers do deny that the unquestioned good results are due to altitude, contending that these are attributable to causes other than elevation, to causes which some localities at the level of the sea possess in common with certain mountain resorts. It must be admitted that these objections have a reasonable foundation, and should not be ignored so long as the profession has reason to credit those witnesses who testify that such lowlands as Florida prove eminently beneficial to some consumptives, and that such places as the Kirghis Steppes of Asia enjoy complete immunity from consumption, although actually below, as is alleged, the level of the sea.

In my previous article I referred to the Kirghis Steppes, in connection with Iceland and the Faröe Islands of Denmark* (320 miles S. E. of Iceland), to illustrate that there were places not mountainous alleged to enjoy complete immunity from consumption. I regret that I cannot at present gain access to any reports published in regard to these distant and unknown Kirghis Steppes, nor to any information further than detached allusions to the effect, that they are below the level of the sea, and that the climate is characterized by its *dryness* and its *sudden changes*, the transitions from heat to cold being not only very frequent, but also very abrupt. My regret is due to the fact, that subsequent research has informed me that “Iceland is (see Leconte’s Elements of Geology) an elevated plateau about 2000 ft. high, with a narrow marginal habitable region

*Ziemssen’s Cyclop. adds to this list the “Island of Marstrand, and the interior of Egypt.” Marstrand is between Sweden and Denmark, and believed to be mountainous.

sloping gently to the sea ;” and that the Farøe Islands are also mountainous, rising abruptly from the sea, attaining a maximum altitude of about 2200 ft., and inhabited chiefly by shepherds, therefore by residents on the heights. Thus, of the localities previously cited in proof that other than mountain localities were alleged to be exempt from phthisis, it now appears that two of the three are mountainous, and therefore probably illustrate rather than furnish exceptions to the general rule, that in our search for localities free from consumption, and therefore proper resorts for those threatened with this disease, we must go to the mountains.

However, it is not my purpose in this article to discuss whether altitude is or is not the all-important factor indispensable to every resort for consumptives ; but rather to present evidence confirmatory of the essential fact that many mountainous regions are exempt from, and do prove highly serviceable to those attacked by consumption. It must suffice the reader to be here reminded that the benefits secured in mountain localities have been ascribed—to the greater rarity of the air, causing quicker and profounder respiration, a more active central as well as capillary circulation, and increased excretion with improved appetite and nutrition ;—to the greater purity of the air marked by its greater transparency, freedom from dust, and richness in ozone which purifies it chemically ;—to the greater dryness and increased electricity of the air ;—to the larger number of sunshiny days, and the intenser heat of the direct rays of the sun, which, conjoined with the charming diversity of mountain scenery, prompt the invalid to frequent excursions, habitual exercise, and life in the open air. Those desiring farther details on these points are referred to my previous article, and to Dr. Dennison’s contribution to the “Trans. of the Internat. Medical Congress, Philadelphia, 1876,” entitled “The Influence of High Altitudes on the Progress of Phthisis,” in which the whole subject is treated more fully and ably than in any other publication in our language.

The confirmatory evidence which I have selected to prove the favorable influence of some mountain regions upon consumption will now be presented.

Dr. Schreiber, Lecturer on Climatology in the Vienna Faculty, teaches* that observation has proved “that consumption in all lat-

*See February No., 1878, Richmond and Louisville Medical Journal.

itudes diminishes with altitude, until it finally disappears altogether," and that "renewed researches have confirmed the good results accruing to consumptives from a residence in the mountains." He, however, deems it fully proved that the good results are not due to altitude, and forcibly urges as one proof thereof, that the altitude of immunity from consumption *lessens* from the equator to the poles, as is generally admitted, while the diminished pressure of the air (i. e., the chief peculiarity of altitude) is *the same* for equal elevations, whether at the equator or at the poles.

Ziemssen's Cyclopædia, one of the most recent and highest medical authorities, states: "It may be regarded as a fact that an *elevated position* protects against phthisis. A height of *at least* 1800 or 2000 ft. seems to be requisite for this purpose. Phthisis is rare on the Hartz, Styrian (in Pinzgau), and Swiss mountains, also upon the Corderillas, and the plateaus of Abyssinia, Persia, Mexico, Costa Rica, and Peru."

A careful investigation undertaken by the Swiss Society of Natural Scientists, and continued during five years has resulted in a report to the effect that in Switzerland decrease of phthisis does beyond doubt follow increase of elevation; and that although it may occur in the most elevated places, it is very rare.

The Sanitarium for Consumption at Gørbersdorf, Prussia (1715 ft. high)—the first of its kind—was opened in 1854 with only twelve patients during the first year, but such was its success, and such is its reputation, that, since 1873, the annual number of patients has been nearly six hundred. The sanitarium at Davos, Switzerland (5200 ft. high), had during its first year (1865) only eight patients, and in ten years increased this number to four hundred. Commending this very emphatic testimony to consideration, let us pass from Europe to North America, reminding the reader that the evidence in favor of the Peruvian Andes, as well as the Corderillas of South America, is abundant and most decisive, and was, as I believe, the first to attract attention to our subject.

All observers report that consumption is very rare on the great Mexican table-land, termed the Anahuac. Jourdanet, a distinguished French physician, and the author of the most elaborate work yet published on the influence of mountain altitude, testifies that during nearly five years' experience on the Anahuac, with 30,000 visits to patients, he observed only six cases of consumption, that this

disease is very rare in Mexico above 6500 ft., and that consumptives from other countries were often completely cured.

Dr. Denison, who presents (loc. cit.) abundant and convincing evidence, in favor of Colorado, cites in addition the testimony of many others in proof that there is an approximative immunity from consumption in all that elevated section of the United States in which are located the Rocky and the Sierra Nevada Mountains.

Dr. Lewis Rogers, of Louisville, reports, and, since he is not an advocate of mountain resorts especially, reports most suggestively, as follows: "Southern California, as we know, has acquired very great repute in the last few years, and has been spoken of as destined to become the great sanitarium for consumption, and many other forms of pulmonary disease. It is to this portion of the State that thousands of people are now going for the restoration of their health, either as temporary sojourners, or as permanent residents. All of the towns mentioned [viz. : San Diego, Santa Barbara, San Bernadino, Los Angeles, and San José] are thronged with people of this kind, particularly in the winter season. To my surprise, *I did not find a single resident physician** at all enthusiastic in his praises of Southern California. They all expressed the rational view of the subject which I have expressed. I asked them if they were in the habit of sending their patients to Southern California, and they replied that they did so occasionally and for a brief period of the winter, but that *they preferred for most of their cases the high and cool resorts of the Sierra Nevada Mountains.*"*

The highlands of Minnesota, having an elevation of from 1200 to 2000 ft., have long enjoyed a fair reputation, which Dr. F. Staples, in Vol. 27 of the Trans. Am. Med. Ass'n., asserts, sustaining his position by strong statistical evidence, is not undeserved.

A section of Texas stands in the same category, and Dr. J. B. Robertson, in the Trans. Texas State Med. Ass'n., 1877, reports as follows: "That portion of west and northwest Texas, lying west of the 98th meridian of longitude, and north of the 29th degree of latitude, has an elevation above the sea (beginning at San Antonio, near the southern line indicated) of five hundred feet." "The beneficial effects of the climate in the area treated of is not simply a matter of opinion on the part of the writer, on purely theoretical grounds. During a practice of over thirty years in central Texas,

*The Italics are mine.

he has seen many patients sent there with clearly marked indications of consumption, and at a time in the history of the country when such patients had to rely almost entirely upon the climate for the benefit they received. In all cases the change gave marked relief with, he believes, a prolongation of life for years with some, and a perfect cure with others." Dr. R. states, however, that this section is not yet properly provided with the improvements and facilities needful for the accommodation and treatment of consumptives. In addition, Dr. Denison alludes to the advantages to consumptives of Fredericksburg, Boerne, Waldo, and Ft. Clarke, (elevation 15000 to 2000 ft.), in the valley of the Rio Grande, Texas.

Passing now to mountain regions adjacent to those of western North Carolina, Dr. E. M. Wright of Chattanooga, reports, (Trans. Med. Soc'ty State of Tenn., 1876,) that the natives of Walden's Ridge a portion of the Cumberland table-lands) enjoy almost complete immunity from consumption. This ridge is from six to seven miles wide on the top, contains about 500 sq. miles, and varies in height from 2000 to 2500 ft. ; the people are poor, the houses are huts, and the accommodation is bad. Farther, Dr. E. A. Hildreth, President (1877) of the Med. Soc'ty of W. Va., addressing this society, testified strongly in favor of the influence of elevation in pulmonary diseases, stating that : " My own experience is limited to Portland, Oakland [2380 feet], and Deer Park [about 2300 ft.], W. Va., to which I have sent cases of phthisis in different stages of development, all of whom were decidedly benefitted. I mean the cough abated or disappeared, the night-sweats or diarrhœa ceased, the appetite improved, there was a gain in flesh and strength, and many were doubtless kept alive for years. Those afflicted with hay-asthma, or autumnal catarrh are, on visiting this region, exempt. If they should be suffering with the disease, the paroxysm will usually cease within twenty-four hours after their arrival."

The section of country to which I now invite attention is thus described in the " Statistical Atlas of the Supt. U. S. Census, 1870 : " " In the high regions comprised between the Blue Ridge and the great chain of the Iron, Smoky, and Unaka Mountains, separating North Carolina from Tennessee, we have *the culminating portion* of the whole chain of the Appalachians. Here, for an extent of more than 150 miles, the *mean elevation of the valley* from

which the mountains rise is more than 2000 ft., scores of summits reaching 6000 ft., while the loftiest peak rises to a height of 6700 ft." Asheville, having an elevation of 2250 ft., is located in the central part of this region, wherein I have passed from three to five months annually during the four years 1873-5-6-7. My direct evidence as a practising physician is limited to the neighborhood of the Warm Springs, on the French Broad River, and some 900 ft. lower than Asheville; though often consulted by the resident population; I have never seen but one case of consumption—this in a mulattress not a native of this section. My hearsay evidence is more extensive, yet I have never heard of but two other deaths by consumption in this neighborhood; these were of a young brother and sister, in whom the disease was said to be hereditary, and whose family had not been long resident in this region. I have made repeated mountain excursions in all directions; and from twenty to sixty miles distant from Asheville; everywhere I was assured of the comparative immunity from consumption of all this section, and in most places my informant denied that *the native residents* ever died of the disease.

Because of the long and well-established reputation of this region, and of the superior requisites for the accommodation of invalids at Asheville, Dr. Gleitsmann, a resident of Baltimore, in search of a suitable location for the treatment of consumption in the mountains of the eastern United States, was induced to establish here, June 1st, 1875, his Mountain Sanitarium. The foundation, at his own private expense, of the first Mountain Sanitarium in the United States, in imitation of the numerous similar institutions which have sprung up in Europe since 1854, and are now in successful operation, suffices to at least prove that Dr. Gleitsmann—who is a highly educated and competent physician, fully posted in the theory and practice of consumption, and thoroughly convinced of the superior advantages of mountain resorts in its treatment,—possesses that admirable trait of character which the French term "the courage of his convictions." The results of this initiatory venture during the two years, June, 1875, to 1877, are set forth in his "Biennial Report" recently published; and, inasmuch as I had good opportunity, having passed two weeks in this Sanitarium in the fall of 1875, and again two weeks in the fall of 1877, to estimate the probable credibility of this Report, I deem it

a duty, because of my credence therein, to call attention to some of the facts presented.

During the first year fifty-one guests were received; and their stay aggregated 3548 days; these numbers were increased during the second year to eighty-two guests and 5717 days; facts, which prove that this institution is growing not only in favor, but also more rapidly than occurred in the European mountain sanatoria. Of the total 133 guests 54 were patients, and only 43 were consumptives. While there is no disposition on the part of Dr. G. to over-estimate the importance of results observed in so small a number as 43 cases, it will still be admitted that if these cases have been carefully studied and conscientiously recorded, as I believe they were, they ought to furnish valuable instruction. The average time passed by these 43 consumptives in the Sanitarium was only about ninety days each, and the results were that 3 died, 9 grew worse, 8 did not improve, 7 were perceptibly improved, and 16 so decidedly as in some of them to justify the belief that they were cured. Thus out of 43 patients presenting all of the various types and stages of consumption, the disease was apparently or certainly arrested in 23! This result, sufficiently surprising without further explanation, becomes even more remarkable, when the cases are analyzed as to the stage of disease. For, out of the total 43 consumptives there were only 26 whom I, or other advocates of mountain resorts, would have certainly advised, to go to the Sanitarium, and of these, 20 were improved or cured. Even this result is not, so far as my own position, a sufficiently favorable statement of the facts, for I have as yet, never gone farther than urge mountain resorts for incipient consumption. Now, it appears that 14 of the above 26 consumptives, while enjoying a fair condition of general health with constitutions comparatively unimpaired, did have extensive infiltrations or even slight destructions of lung tissue, while only 12 of the 26 were unquestionable cases of incipient phthisis. These last twelve cases, having only "catarrh of the apex and infiltrations of the smallest extent," resulted in one case "improved" and eleven cases "very decidedly improved or cured;" that is, in *every case* of incipient phthisis the progress of the disease was apparently arrested, and would probably so remain under a continuance of the conditions which led to the arrest.

The strongest objection which the experienced practitioner is

likely to make to the results above reported are, that "they are too good to be true;" therefore I propose to now present the evidence of other witnesses than Dr. Gleitsmann—witnesses whose disinterestedness, so far as he and his sanitarium are concerned, cannot be justly called in question; first, some indirect evidence from one source corroborative of Dr. G.'s reported results.

The indirect evidence consists of testimony to like results obtained in a distant mountain region of this country. Dr. Denison records, in the article published since Dr. G.'s report and already referred to, his experience with 66 consumptives in Colorado. Of the total 66 cases in all stages of the disease, 40 were "slightly improved," or "much improved or cured;" but, of the 66 cases only 25 were in the first stage, and of these 17 were "much improved or cured," 7 "were slightly improved," and 1 died, owing as (Dr. D. believes) to bad treatment in the hands of an incompetent practitioner. These favorable results coincide with those of Dr. G.—and this concurrence, giving strength to each, tends to inspire credence in both reports. Since the two reporters classify differently their cases, of which each had a comparatively small number, it would not prove instructive or satisfactory to institute any strict comparison between the results reported by each; however, in this connection, the following facts are of interest. On the one hand, Dr. Dennison's cases had the advantages of a much more elevated mountain region, and also of a much longer residence in this region; for his cases averaged about one year each in Colorado, while Dr. Gleitsmann's cases averaged about 90 days in his sanitarium. On the other hand, Dr. Gleitsmann's had the decided advantage of residence in a sanitarium specially devised and conducted for the benefit of consumptives. His patients have constant access to, and are kept day and night under the surveillance of a skillful physician, who has not only his own reputation but also his financial investment in a sanitarium dependent on his watchfulness, as well as on his skill. Thus I concur with those who advocate that it is of extreme importance in this as in other obstinate chronic diseases, that most patients should live under the constant supervision of a competent physician. All physicians admit the very great importance in the treatment of consumption of proper exercise, clothing, ventilation, and diet; and all know how incredibly ignorant the non-professional generally are in regard to those essentials, as in all

else which concerns hygiene and medicine ; hence the great advantage of skilled supervision, exercised constantly over all the details necessary to enforce a proper mode of life.

I will now present testimony, from three sources besides myself, which tends to corroborate the correctness of Dr. Gleitsmann's "Biennial Report." This evidence merits special consideration because of the circumstances which elicited it. Inspecting at Asheville, Dr. G.'s register of patients, I found the name of each followed by the name of the physician who had advised the patient's removal to the Sanitarium ; and I made a private memorandum of those physicians who had sent the largest number of patients, and who were also best known to the profession. Only three names were thus noted, and the testimony of all three is presented. Thus, the evidence has not been called over in order to adapt it to some new pet theory or to an interested purpose. Science demands, and to the best of my ability I habitually present, as is now done, "the whole truth."

Professor A. L. Loomis, of New York city, whose local reputation as a practitioner in diseases of the chest is unsurpassed, and whose fame as a writer on this subject is well known throughout the United States, sent to Dr. G.'s Sanitarium three patients during the first, and nine during the second year ; facts sufficiently indicative of his favorable opinion. He writes that he did not keep a record of his cases with sufficient care to enable him to commit himself farther than by the statement that "the majority have improved."

Dr. J. B. Gaston, an able and well known physician of Montgomery, Ala., sent to the Sanitarium five patients during the summer of 1877. He testifies as follows : "All were suffering with pulmonary disease, which was in its incipency, and all on their return home in the fall were, and still are, *in better condition* than when they left. One was very much improved, and in three others the improvement was decided. All, I am satisfied, would have improved still more had they remained longer at Asheville, and had thus avoided the check to improvement, which was sensibly felt by one at least, as the result of the debilitating influence of the weather here in the early part of October. The condition of all of these patients would, in my opinion based on experience in similar cases, have grown worse had they remained at home during the time they were at the Sanitarium."

Dr. E. P. Gaines, one of the oldest, ablest, and most experienced of the physicians at Mobile, Ala., has sent to the Sanitarium four patients, and has written to me so instructively that I quote him at length, as follows :

“ My attention was first called to Asheville, as a resort for consumptives, in an article written by yourself in the May No., 1876, of the *N. O. Med. and Surg. Jour.* I immediately began to advise patients to go there. The first one to go was a young lady who had been under my care for a long time, and was steadily drifting into consumption. I gave your article to her parents to read. They sent her on; she remained six months in Dr. G.’s Sanitarium, and the benefit she had obtained there has lasted up to the present time. She has some bronchitis now, but her appetite, digestion, and general health are good, and she is fat and rosy ; all the physical signs have improved.

“ The second case was a young man whose father died of consumption. His health had been failing for a year ; he had had fever occasionally, had night-sweats, and had steadily grown thinner and weaker. Finally he began to cough, and an examination clearly proved by the physical signs, that what I had predicted twelve months before had come to pass—a deposit of tubercles in the apex of the lungs. I had but little hope that anything would do him any good, but recommended him to go to Asheville and put himself under the care of Dr. G. He did so, and spent several months there in the summer of 1876. On his return he came to see me, and all of his symptoms, constitutional, rational, and physical, had so improved that I could hardly realize that I had before me the same man. Knowing what a dreadful thing inheritance of this disease is, and having a poor opinion of the atmosphere of our southern seaport towns, I urged him to close up his business in Mobile, and go back to live in North Carolina, for I believed that he *could live there*. He thought more of his business than of his health, went back to the close confinement of his store, and by the end of the winter had lost nearly all he had gained. This past summer he travelled again, but, though in a mountainous country, he tells me that he did not receive the same benefit he had secured at Asheville.

“ The third case was a young gentleman who sent for me to see him for a hemorrhage from the lungs ; he was anxious to get back

to his home in Montgomery, and left that night. On his arrival, he wrote asking me what he should do to ward off consumption. I recommended him to go to the Sanitarium, where he has passed two summers. He is now well ; a fine, hearty-looking young man. I expect he will spend all of his summer holidays there, he likes the place so much.

“ All the four patients sent by me did well except one, who returned home worse. This fourth patient was a young man who, about June 1st, 1877, came into my office to consult me in regard to a slight hemorrhage from the lungs. He had been attending his work, and been feeling quite well up to the time of his hemorrhage. However, he had had a cough, and had been taking cod-liver oil by the advice of a physician. There were no physical signs of any moment, but I knew that he had recently lost a sister from consumption, and formed a very grave opinion of his case. I prescribed, and told him to quit work, go home, and maintain a recumbent posture, etc. In a few days I was summoned to visit him. A fever had set in which lasted nearly four weeks, and which had all the well-marked symptoms of an acute bronchitis. He also had several hemorrhages during this time. When he recovered from his fever, he was much emaciated and very weak. His fever had gone, but the bronchial symptoms remained, and they were most perceptible in the upper portion of the lungs. My diagnosis throughout was that miliary tubercles were scattered through the lungs, and were the cause of all that had occurred ; and yet the mountain air had had an effect so wonderful in the cases mentioned, that I felt justified in sending him to the Sanitarium. He improved so much after he got there, that on one occasion he so over-exerted himself in walking, that it brought on a hemorrhage, succeeded by many others, so Dr. G., fearing they might prove fatal, sent for his parents. He is now (Nov. 15th, 1877) at home, confined to his bed, and I am told that he had a hemorrhage to-day. You will thus see that this is a case of acute tuberculosis ; and it is nothing against either Dr. G.’s Sanitarium, or the climate of Asheville, to find that they cannot do impossibilities.

“ Thus, my experience so far is small, since I have sent but four patients who remained there during the summer months only. However, the improvement in three of the cases was so well marked, that I shall continue to advise my consumptive patients to go there.

All of my patients went to the Sanitarium, and their improvement was due to Dr. Gleitsmann's skill as well as to the purity of the air at Asheville. I believe that you are right in recommending the place as a resort for consumptives, and that your opinion is worth more than that of the rest of us, since you have been there on two separate occasions, and know how well the Sanitarium is managed."

I will close the corroborative testimony by reporting the case of one of my own patients sent recently to the Sanitarium, first reminding the reader that in addition to the case, I had ample opportunity during my two visits to see a number of consumptive inmates, and to become satisfied by my own observation, as well as through the testimony of Dr. G. and of the patients themselves, that the beneficial results claimed have not been exaggerated. While at the Warm Springs, N. C., 37 miles west of Asheville, I, on July 2d, 1877, addressed Dr. G. the following letter: "This will be presented by Captain ****, who by my advice goes to Asheville, to place his wife under your charge. The apex and upper fourth of her right lung are seriously affected; prolonged expiration verging into tubular breathing, associated with crepitation and undue resonance, are well marked. However serious these signs, there are several hopeful symptoms which you will readily appreciate. Should she improve, as I believe she may at your Sanitarium, she will probably make a long stay. It is needless to urge you to do your utmost in her behalf." I deemed this case hopeful *provided* she went to the Sanitarium, and because of my confidence therein; without this and guided by past experience, my prognosis would have confidently been death within six months. In less than three months I met this patient in the Sanitarium in a condition so vastly improved, that I could with difficulty realize a change so different from my past experience, and so superior to the hope I had ventured to entertain. Admitted on July 3d, she promised me to remain a year if needful, but she had improved so incredibly, and was so anxious to return to her husband that on October 1st she—whose condition at the Warm Springs had been such as to cause much anxiety about her transportation to Asheville—left the Sanitarium to travel alone to her home in a distant Northern State. I deemed this early return imprudent, and fear that the apparent certainty of perfect recovery at the Sanitarium will not be realized at her home. Having now presented some testimony from others besides Dr.

Gleitsmann as to twenty-two cases sent to his Sanitarium, I close the evidence upon the credibility of the results reported as secured there.

My recent second visit to the Sanitarium justifies me in emphatically repeating the praise in my former article of its admirable management. Its excellent table, loaded with choicely cooked and appetizing dishes, its ventilation, cleanliness, good order, comfort, and moderate charges of from \$40 to \$50 per month, cannot be too highly lauded, even by one who like myself has patronized the most famous hotels and restaurants in Europe, as well as in America. I have known many invalids to visit Asheville, and there remain in far less comfortable but just as expensive quarters, because prejudiced against all institutions for the accommodation of the sick; imagining that, at the table and incessantly everywhere within the Sanitarium, their spirits would be depressed, and their sensibilities offended by the sights, sounds, and smells which are naturally associated with the sick. Testimony found on the delicacy of the sensibilities of one who, like myself, has been hardened by years passed within hospital walls, might be accepted with incredulous scepticism. Therefore, without dwelling on my own conviction that the realities are very different from the anticipations of the inexperienced, and that no such offenses are found in the Sanitarium, I will state that on each of my two visits I have been accompanied by three ladies, not only refined, but also as inexperienced and prejudiced as any women of intelligence are likely to be. I carefully watched the effect on them, and testify that they were most agreeably surprised, assuring me that they found but one thing objectionable—the proclivity of the invalids to dwell upon their individual ailments. This made slight impression on me, as I encounter great difficulty in finding *healthy people out of sanatoria* who will not persist in wearying me with petty personalities; those of my readers more fortunate might complain of the sick within sanatoria.

The facts, already stated, should be recalled, that of the total 133 guests during two years, more than half were perfectly healthy; of the 54 invalids, few were sufficiently ill either to be confined to their beds or to be unpleasantly suggestive of sickness and death, and these few were not to be seen unless sought for. I have never visited a summer resort for the healthy, where the

company at the table or in the parlor was more cheerful and agreeable. On each visit I have found a larger number of persons of refinement, culture, and intelligence, than one meets habitually at hotels; for the reason, perhaps, that the class apt to be socially offensive has not the means, or, if so, not the intelligence to seek a sanitarium. As I am anxious to prove a trustworthy guide to those who may be induced to visit the Sanitarium, I must report the chief objection made against it by its consumptive inmates. This was the *ennui* of living in a place where they were cut off from family, friends, and their ordinary occupations. Some patients had, as of course it is better that every consumptive should have, their dearest relative with them; and these patients were as content as the sick are likely to be in any place. Invalids should not forget that even the healthy find the search for happiness delusive, for contentment arduous, and should prepare themselves, as best they may, for resignation to the conditions necessary for their restoration to health. Submission as cheerful, occupation as entertaining, as possible are important conditions.

Time, also, is a most important condition in the treatment of every disease, in none more important than in phthisis; and its victim should not be encouraged to expect its arrest, much less restoration to health, within some definitely fixed period. Three months is the shortest time within which decided improvement should be hoped for; if double or quadruple this time yields lasting good results the patient should deem himself fortunate; and if it should prove necessary that some, in order to preserve health, should pass, as is correctly intimated by Dr. Gaines, all the rest of their lives in the mountains—then, even this misfortune is far less grievous than the habitual progress and termination of this fatal disease. Invalids sent to the mountains cannot be too urgently warned against too short a stay, against undue confidence in a brief alleviation, and against the natural impatience to return home; faults which have often caused a rapid loss of all that has been gained. This loss for a second time is more difficult to regain than was the first.

The reader is also reminded that experience seems to have proved, contrary to what was expected naturally and therefore was taught, that hemorrhagic cases in the first stage are, as a rule, decidedly benefited in the mountains, and that the winter season is as favor-

able to all cases as is the summer. Dr. Schreiber (loc. cit.) represents many high authorities in stating that, "during the past ten years hundreds of invalids have wintered in the elevated valleys of the mountains with just as favorable results as in the so-called southern resorts;" and that "the practice of sending invalids to winter in the mountain regions has proved a success." At Davos, in the mountains of Switzerland, the patients are urged to remain until the snow begins to melt.

In concluding this article, I will, in order to avoid being misunderstood, allude to two topics. First, I desire it understood, that while I incline to believe that the climatic conditions which are the results of altitude are important factors in the hygienic treatment of consumption, I have not ventured to recommend any and all mountains, but only such mountain resorts as experience seems to have proved beneficial, and as supply proper accommodation for invalids. Second, I desire it understood, that in advising mountain resorts for consumptives I have had in mind solely those in the first stage of the disease; or those who, although long afflicted, have advanced but slowly on the downward road, and still maintain sufficient vigor to spend a large portion of time in the open air. I have not taken the grave responsibility of advising where those in the advanced stages of the disease should go; for, I fear that the best advice which can be given to consumptives already confined to their beds, with lungs disorganized by softening and cavities, is—to remain in, or to forthwith go to the place where they can live with most comfort, and face death with greatest resignation. However, others, with greater experience as to some resorts, seem to be more hopeful. For instance, on pp. 422-3, "Trans. Internat. Med. Congress," Dr. H. A. Johnson, of Chicago, states: "I believe that in the earlier stages of the disease, patients are benefited by going to the mountains, but, on the contrary, when softening has set in, whose cavities exist, I believe that it is hazardous for them to do so. A warm, mild climate is better then. I had about fifty patients last winter in Florida, and they came back better; even those in whose lungs cavities existed were better than they would have been had they stayed in Illinois." He therefore "will continue to advise patients in the *first stages* of phthisis to go to the mountains, and in the latter stages to go to Florida or Georgia."

Finally, a few words of instruction to the traveller. One railroad

from the West, and two from the East, are advancing towards but have not yet reached Asheville. Proceeding by rail to Morristown, Tenn., which is between Knoxville and Bristol, and furnishes miserable accommodation, the traveller will find a branch road to Wolf Creek, 40 miles distant. From thence to Asheville is 46 miles by stage, through the superb scenery of the French Broad River, but over a mountain road so difficult that $3\frac{1}{2}$ miles is deemed good staging. The Warm Springs Hotel, 9 miles from Wolf Creek, is an excellent place to rest.

On the east of Asheville is the "Piedmont Air Line Railway," with two depots—Spartanburg, S. C., and Charlotte, N. C.—from whence are branch railroads in progress to Asheville. The Spartanburg road will reach, it is said, this spring within 30 miles of Asheville; and the terminus of the Charlotte road, now about 20 miles from, will probably be this year (possibly in July) within 7 miles of Asheville. The Spartanburg route will probably be the best one for travellers from the South, while those from the North should take the railroad leading from Charlotte, N. C.

CORRESPONDENCE.

OUR PARIS LETTER.

Sketch of Claude Bernard—Professor Sée on Iodide of Potassium and Iodide of Ethyl in Asthma—Asthma in Bright's Disease—Hypodermic Injection of Nitrate of Silver for Sciatica, and Injections of Ice Water to Reduce Temperature in Fever—The Paris Exposition.

11 RUE NEUVE DES CAPUCINES,
PARIS, March 18th, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—Claude Bernard, of whose death I informed you in my last letter, was born in 1813, near Lyons, and of humble parentage. After having received a very moderate education, he

commenced life as an assistant to a druggist, and devoted himself for some time to the rinsing of vials and the preparation of compounds in a back office. Becoming disgusted with this occupation, he determined to try his fortunes in Paris—the goal of every Frenchman's aspirations—believing that a five act tragedy which he carried in his pocket, would open for him a sure and short route to fame and riches. Fortunately for science, this expectation proved the vainest of delusions, and the disappointed author took up his residence in the "Latin Quarter" as a student of medicine. How he managed to exist and to pay for his inscriptions, during this period of his career, is a mystery, but it cannot be doubted that he was subjected to trials and discomforts which would have broken the spirit and paralyzed the energies of any ordinary man. Bernard, however, rose superior to the difficulties of the position, and ultimately graduated with distinction as a doctor of medicine.

It seems that his first ambition was to be a surgeon; but having by a lucky chance become an assistant in the laboratory of Magendie—the great pioneer in experimental physiology—he grew enamored of that field of science and determined to consecrate his life to its cultivation. From that time forward his career was "upward and onward"—honors flowed in an unbroken stream upon him and even *confrères* vied with each other in acknowledging his merits and in rewarding his achievements.

In 1849 he was awarded the grand prize in experimental physiology for his work on the pancreas. In 1853 after an unusually brilliant examination, he took the degree of Doctor of Sciences. In 1854 he was elected member of the Institute and nominated Professor of General Pathology in the Sorbonne. In 1855 he was named Professor of Experimental Medicine in the College of France—succeeding his distinguished master and securing a position for which he had faithfully worked through a long series of years. Subsequently he was elected a member of the Academy of Medicine, created a commander of the Legion of Honor, elevated to the chair of General Physiology at the Museum of Natural History, honored with a seat in the Academy of France, and nominated Senator of the Realm by a Sovereign to whose reign his triumphs had contributed some of its most resplendent glories.

Of his labors and his triumphs it is impossible now to speak in detail. Every physician, however, is familiar with his discoveries

in connection with the nervous system, the phenomena of life, the action of poisons, the offices of the pancreas, the functions of the liver, the rôle of the vaso-motor system, the physiology of the cranial nerves, the principle of recurrent sensibility, the forces of the circulation, the laws of the glandular series, and the many other important additions which his genius has made to the sum of human knowledge. His famous inaugural discourse on the experimental method produced a sensation throughout the domains of science; his magnificent contributions to the *Annales de l'Académie des Sciences* have been read with admiration and delight wherever medicine has a votary : and his great works, such as “*Leçons de Physiologie Expérimentale*,” “*Leçons sur les Substances Toxiques et Médicamenteuses*,” “*Leçons sur la Physiologie et la Physiologie du Système Nerveux*,” “*Leçons sur les Propriétés des Tissus Vivants*,” &c., &c., will remain the classic text-books in the medical libraries of all civilized nations through successive generations.

The funeral services of this illustrious man took place just one month since, at the public expense, and was a most imposing ceremony. St. Sulpice was crowded, not alone with distinguished representatives of the profession which he had so signally adorned, but with the leading statesmen, savants and soldiers of France—who came to pay their last tribute to one whose services to science and humanity had secured for him a conspicuous place in the history of the race, and reflected eternal honor upon the land which gave him birth.

It has been said that Claude Bernard was “no orator.” It is true that he lacked that fervor of diction and that trick of manner which are usually denominated eloquence ; but to me he was the most attractive lecturer that I ever listened to. Although more than twenty years have elapsed since I first had the pleasure of hearing him, the impression left upon my mind is as distinct as if it were made but yesterday. He had then just commenced his career at the Sorbonne, and was engaged in the task of demonstrating the glycogenic function of the liver—an investigation which he pursued with special zest and regarded as one of his greatest achievements. As was the custom in those days, he remained seated whilst delivering the strictly didactic portion of his lectures, and only rose to his feet when it became necessary to elucidate his theories by experiments upon the inferior animals which were pro-

vided for the purpose. Possessing a commanding figure, a classic face, a splendid head, a manner at once dignified and simple, he *looked* the "great teacher" more than any man that I ever saw. It is true that a slight hesitancy of expression and confusion of ideas marred the beginning of each one of his lectures, and produced a certain feeling of disappointment among his auditors; but in a short time, having forgotten himself and become absorbed in his theme, he grew wonderfully clear, correct and copious alike in expression and in thought, and ended by completely enchaining and enchanting all who heard him. Betraying no excitement himself as he unfolded his argument, but growing more solemn and impassable as his hearers were carried away by the enthusiasm which it awakened, he seemed to lose his humanity in the inspirations of his mission, and to become the divine apostle of a new revelation respecting the laws of nature and the mysteries of the organism.

It was impossible to listen to his lectures or to witness his experiments without arriving at the conclusion that he was thoroughly honest and accurate. He demonstrated every proposition; he followed his investigations to their legitimate conclusions; he weighed and measured facts with absolute conscientiousness; and he had no other ambition than to discover the *truth* and to proclaim it to his fellow-men. Those who knew him best declared likewise, that his private life was illustrated by a probity and a propriety worthy of the highest commendation. To great dignity of character he added a modesty of demeanor and a sincerity of conduct which won the admiration and respect of all with whom he came in contact. Although his genius so enriched the world of science, and notwithstanding the wealth of honors of which he was the recipient, he died poor, having exhausted his earnings in liquidating the debts of his parents—for which he was in no wise responsible.

Such was the career of Claude Bernard—the great physiologist, the popular teacher and the good man—and it is well worthy the faithful study of every member of our profession, since it shows to what a height of grandeur and degree of excellence the humblest physician may attain by a life consecrated to earnest labor, high resolve and unfaltering honesty.

Professor Sée has just communicated another of his discoveries (?) to the Academy of Medicine. He announces with great emphasis

that the iodide of potassium is a specific for asthma, and that the iodide of ethyl is a remedy of scarcely less potency. Commencing with *twenty-two* grains of the iodide of potassium daily, he increases it up to *forty-five* grains daily, and continues the treatment for an indefinite period. Usually, however, at the end of the second or third week the paroxysms are ameliorated or controlled, and the dose is brought down to *twenty-two* grains, the quantity given in the first instance. The effects of this remedy upon the disease he states to be these : respiration becomes free at the end of from one to two hours ; the paroxysm is arrested in its development when the drug has been administered some hours in advance of its appearance ; the second attack is invariably prevented, and the orthopnoea and emphysema subside with or without the development of disseminated mucous râles. Inhalation of the iodide of ethyl, in quantities of from six to ten drops, several times during the day, has yielded in his hands equally satisfactory results. As regards the use of the iodide of potassium in asthma, I have only to say, that it has been recommended in every American text-book for the last ten years ; and, that, though it undoubtedly possesses value in certain forms of the disease, it is by no means a specific or a panacea. As asthma is in a majority of instances more of a symptom than a disease, and as it frequently depends for its production upon causes entirely dissimilar in their character, the assertion that any one agent possesses therapeutical properties in connection with it of universal infallibility, must be taken *cum grano salis*, from whatever source it may have come. I have not yet had an opportunity to test the virtues of the iodide of ethyl in asthma although prepared to do so for some weeks past. This substance—was, as you know, discovered by Gay-Lussac in 1825, and was first experimented with by Huette, who declared that “ it produced upon him an immediate sensation of quietude and comfort, the respiratory movements being executed with greater facility and freedom ; and that a vigor was imparted to all the muscles, while the appetite was stimulated, the secretions were rendered more active, the pulse became fuller, and a feeling of increased mental activity and power was experienced.” Professor Sée following the lead of Huette, first tried it upon persons in good health who were made to inhale from six to eight drops six or eight times per day, with the result of quickly

experiencing a far greater facility of respiratory movement. Nothing like anæsthesia or somnolence was induced ; the heart and the circulation remained undisturbed ; and absorption went on as usual, as was exemplified by the fact that in ten minutes after the commencement of the inhalation iodine was discovered in the urine. He then tried it in *five* cases of asthma, *three* cases of cardiac dyspnœa, *two* cases of chronic bronchitis with difficult respiration, and *one* case of œdematous laryngitis, with marked advantage in every instance. The asthmatic patients were especially benefitted by these inhalations, and, hence, the glowing terms in which Professor Sée called the attention of the Academy to the merits of the remedy. Although "one swallow does not make a summer," and much must be credited to the peculiar temperament of the observer, I am inclined to the belief that the iodide of ethyl will take a prominent position in the therapy of asthmatic affections, and that Dr. Sée deserves the thanks of the profession for his investigations in regard to it.

I cannot leave this subject without referring to the fact that the late lamented Sir William Fergusson suffered during his late illness with severe attacks of asthma, which were undoubtedly *renal* in their origin. You will also, perhaps, be able to recall the circumstance that, in an exceedingly interesting article, published in *The Medical Times and Gazette*, Dr. George Johnston, of London, has called attention to the fact that asthma is not an infrequent concomitant of Bright's disease and has attempted to explain the phenomenon upon the theory of an interrupted circulation through the pulmonary capillaries occasioned by a spasm of the pulmonary arterioles which are stimulated to this excessive contraction by the influence of the impure blood upon the vaso-motor nerves and centres. Influenced by these teachings I have made it a rule to examine the urine for albumen in severe and protracted cases of asthma ; and to be influenced by the indications furnished by the test-tube, in determining what remedial agencies to invoke. In paroxysms of renal asthma the hypodermic administration of morphia—which is so valuable a remedy in other varieties of the disease—is contra-indicated, since opiates tend to check the secretions of the bowels and the kidneys and to increase the blood contamination ; while inhalations of the vapor of the nitrite of amyl or moderate doses of chloral hydrate and bromide of potassium in combination give the most satisfactory

results. When, however, the urine is very scanty and the blood is consequently greatly contaminated by retained excreta the chloral hydrate may fail to relieve and may even add to the distress. Under such circumstances the dyspnoea can be most effectually relieved by the employment of those remedies which tend to the purification of the blood by promoting cutaneous and intestinal secretion, while the diet is appropriately regulated both as regards quantity and quality.

Hypodermic medication is still being vigorously pushed in Paris. The latest agony in this regard is the treatment of obstinate sciatica by subcutaneous injections of nitrate of silver. Dr. Auguste Dureau, who is the special advocate of this mode of treatment, concludes his thesis on the subject with the enunciation of the following propositions, viz : that injections of nitrate of silver should be tried in all old and obstinate cases of sciatica ; that these injections when made in the depths of the tissues are not to be feared, since they do not produce abscesses ; that the cure or marked improvement is always very rapid ; and finally that this method is less alarming and much more efficacious than that of the hot iron. There seems to be some difference of opinion in regard to the strength of the solution and the number of drops to be injected. Dr. Damaschino employs a twenty-five per cent. solution in doses of five drops ; Dr. Luton varies the strength and quantity of the solution, sometimes using from twenty to twenty-four drops of a ten per cent. solution, and at others the same quantity of a five per cent solution ; Dr. Bertin injects from fifteen to twenty-five drops of a five per cent. mixture ; and Dr. Gerin-Roze uses a fifteen per cent. solution in injections of fifteen drops. It seems to be generally agreed that success follows this treatment in some severe cases, and that, with proper care, no unpleasant results are produced. The canular of the syringe should be inserted just at the point in the nates at which the nerve makes it exit, and carried deep enough to penetrate the dermis.

The injection of chloroform under the skin is also being again urged by Dr. Ernest Besnier. According to him, pure chloroform can be injected into the cellular tissue beneath the skin without the production of any local accident or severe pain and with the result of securing all the soothing effect of morphia, whilst the patient is exposed to none of the inconveniences or dangers which associate

themselves with the use of that drug. Whilst a number of distinguished physicians here declare, that, according to their experience, local accidents frequently ensue notwithstanding the most careful introduction of the chloroform, they all admit that it sometimes relieves local pain very promptly without producing any impression upon the system at large. The general opinion, however, seems to be that this remedy is likely to have only a limited range of employment and that it is not destined to take the place of injections of morphia, as its advocate so confidently believes.

In this connection I can but say, that I have seen astonishing effects, both local and general, produced by the subcutaneous injections of *pure water*. In many cases of fever I have relied exclusively upon repeated injections under the skin of iced water for the purpose of reducing the temperature, and have succeeded admirably with them. It is astonishing how readily and with what little local disturbance a considerable quantity of water can be thus introduced into the system; whilst, with a single ounce I am confident of my ability to induce a more decided and prolonged abatement of heat in any ordinary case of fever, than can be effected by a cold bath or any reasonable dose of quinine.

In cases of insomnia, I have seen injections of water induce sleep as readily as morphia ordinarily does; and for the relief of pain of all kinds and in every locality, I have successfully resorted to this special treatment in a great number of instances. Only recently, while attending a gentleman in this city who was suffering with a most painful disease, I used injections of water and injections of morphia, sometimes alternately and then again indifferently, with the result of producing both anodyne and hypnotic effects with equal certainty. When called upon by him to explain this action of water upon the system, I told him frankly that it was impossible for me to do so—that whilst convinced by my own senses and his experience of the fact of its remedial effects, I could not fathom the rationale of its operation. Can you or any one of your readers give an intelligent answer to his enquiries?

The great Exposition which is to open here in May is now the absorbing topic of interest. As drugs of every description, surgical instruments and appliances, ambulances and their outfits, hygienic appliances, and a multitude of objects in regard to which professional men only are capable of forming a correct judgment

will be liberally displayed, all the nations of Europe have selected prominent medical men for positions in their commissions. It is earnestly to be hoped that our country will have the wisdom and the tact to do likewise; but from the immense number of politicians who are seeking these appointments, I greatly fear that physicians will be overlooked in this regard, and that we shall be without proper representatives in one of the most important departments connected with the Exposition.

Very truly and respectfully yours,

EDWARD WARREN, (Bey) M. D., C. M.

OUR NEW YORK LETTER.

15, WEST TWENTY-SIXTH STREET,

NEW YORK, March 18th, 1878.

N. Y. OBSTETRICAL SOCIETY: *Fœtal Hydro-Nephrosis; Remarkable Ovariectomy; Ovarian Corpuscles not present in all Ovarian Cysts; Effect of Ergot in Inducing Inflammation for Uterine Fibroids, none being present; Carbolic Acid in Ovariectomy; Chronic Cystitis; Death from Ether, Incontinence of Urine; Artificial Dilatation of Urethra; Fissures of Neck of Bladder; The Hot Uterine Douche; ACADEMY OF MEDICINE: Billington on Scarlet Fever; Pathology; Treatment; Inunction; Inoculation, &c. Piffard's Diabetic Test. Funeral Rites of Similia Similibus.*

THE OBSTETRICAL SOCIETY met March 6th, at the residence of Dr. T. A. Emmet, whose vast and rich collection of old works, palimpsests and rare and beautiful books, ante dating the era of printing, afforded a lively interest, and attested the culture of that gentleman in directions other than that in which he is an acknowledged master.

Dr. Hanks read the details of a case, occurring in the joint service of himself and Dr. Lusk, in which labor was interfered with and delayed by great abdominal enlargement of the fœtus. The fœtus of a female was exhibited and the difficulty shown to have arisen from hydro-nephrosis, the result of imperforate urethra.

There was distension of bladder, ureters and cystic enlargement of kidneys, all consequent upon retention of the foetal urine. The contained fluids were of a colloid nature.

A discussion grew out of this as to the relations between congenital vesical fissure and imperforate urethra, two opposite conditions the first due to arrest of development, the two lateral folds failing to unite ; and the latter the effects of over development, leading to redundancy of tissue, mainly of the anterior urethral wall.

Dr. Emmet read the history of a most remarkable and instructive case of ovariectomy. The diagnosis was up to the moment of the operation a matter of doubt as between ovarian tumor and fibre-cyst. Repeated examinations of the fluid revealed the presence of no ovarian corpuscles, which are commonly regarded as a diagnostic indication of trouble in the ovary. There was difference of opinion among many eminent gynaecologists as to its nature, and the woman had been, prior to her coming under Dr. E.'s charge, treated with large and long continued doses of ergot. Dr. Emmet was from the first inclined to the diagnosis of ovarian cysts. There were symptoms of peritoneal inflammation, which Dr. E. holds occasionally follow the administration of ergot for fibroids when none exist to receive the effect of the drug. Ultimately septic poisoning supervening, with fatal tendency, the operation was determined upon, the consultants, however, not being fully agreed to the procedure. It required two hours, and the tumor proved to be ovarian, with extensive adhesions, and full of putrid pus. The peritoneum was everywhere inflamed and adherent. Two carbolic sprays were kept playing into the incision and upon the peritoneum, with the remarkable effect that this membrane changed color, and upon completion of the operation *all traces of peritonitis had disappeared*. And, still more remarkable, when the patient recovered from the anaesthesia *no symptoms of septicemia remained*. Could Lister's system receive a more emphatic attestation of its efficacy. The patient made a speedy and good recovery, in spite of the almost hopeless condition. Your correspondent thinks in view of this case and the corroborative evidence furnished by others, of every kind and condition, that no surgeon should neglect to employ Lister's method, or some modification of it in all surgical operations known to yield even a small percentage of fatal issues. And the courts would be fully justified in attaching responsibility to surgeons for

failure to use "that *due care and diligence*," of which the antiseptic method has become such an important integer.

Dr. Emmet presented the history of a case of chronic cystitis in a lady. This trouble had existed several years, and an effort had been made elsewhere to relieve it by dilatation of the urethra. This procedure left an incontinence of urine which superadded to the cystitis rendered life burdensome. The urine under chemical and microscopic query gave no response of kidney disease. An artificial vesico-vaginal fistula was made, under ether as the anæsthetic, but unfortunately the patient died of uræmic poisoning on the third day, never having fully recovered consciousness, and not a teaspoonful of urine having been excreted. The autopsy showed a contracted bladder, with small pouches of the thickened mucous membrane apparently protruding, hernia-like, through the muscular coat, the ureters were inflamed, enlarged in calibre and thickened; marked pyelitis; destruction of glomeruli and pyramids of one kidney; almost complete cystic degeneration of the excreting parts of the other kidney. All this was exhibited by well executed drawings from the specimeo. It is difficult to apprehend how such extensive renal disease can exist, without giving any sign during life; and the death from ether was quite explicable upon the theory of the overwhelming effect upon a kidney already working up to its fullest capacity. It was thought that the *point de départ* of the disease was in the bladder, and by continuity it extended upwards, through the ureters, with the destructive result indicated. No ophthalmoscopic examination was made of the fundus oculi; but a prominent oculist present thought that advanced renal trouble was not likely to exist without inducing some recognizable changes in the retinal circulation.

Dr. E. availed himself of this case to express his doubts of the advisability of resorting to dilatation of the female urethra, since within the past year four or five cases of incontinence of urine, had come under his notice, and they may practically be said to be incurable. Dilatation of the urethra is a common recourse to facilitate the exploration of the pelvic contents; for the relief of cystitis; for removal of stone; and for treatment of fissures in the mucous membrane of the neck of the bladder. If it is proven to occasionally lead to permanent incontinence, a condition more distressing

than the original one, there arises a question as to its remaining upon the list of warrantable measures.

In eleven dilatations made by himself incontinence followed in two cases, one of which was subsequently cured by slitting up the whole urethra and removing redundant tissue.

He attributed the incontinence to the cicatrices which followed the procedure, and which prevented complete occlusion of the urethra.

Dr. Hanks thought that ruptures and cicatrices of the cervical and urethral lining were favored by chronic inflammation, but that in the normal condition of that membrane these accidents must be very rare.

Dr. Noeggerath agreed with this view of Dr. Hanks, adding that in from 75 to 100 dilatations, made by himself for various causes, only two cases of permanent incontinence followed. Often perfect control was regained immediately, and always within two or three days the restoration of the *sphincter* was complete. Hence he thought that if alone for the value the operation possessed in facilitating explorations of the anterior uterine wall and pelvic contents it ought to stand as a justifiable one.

Dr. Emmet was surprised to hear Dr. Noeggerath speak of a *sphincter* in the bladder, as no sphincter exists in the female bladder. The power which women have of holding their urine is due to the falling together of folds of tissue and to the rugæ of the urethra. Complete occlusion by these folds is prevented when cicatrices form among them, and if incontinence follows dilatation even to the extent of two per cent., as indicated by Dr. Noeggerath's case, the operation is scarcely justifiable—incontinence being a most distressing condition, and practically incurable. Dr. Noeggerath in speaking of a sphincter wished to be taken in a physiological and not an anatomical sense.

Dr. Gouley, by invitation, expressed his views in reference to the dangers of dilatation, and said it was a question of the extent to which it may be safely done. He was disposed to adopt Dolbeau's rule of 13-16 of an inch for an average, and the dilatation may include both urethra and a part of the neck. He had dilated the female urethra four times without accident, for the removal of papillomata and for other causes.

Dr. Emmet expressed his preference for artificial fistule over dilata-

tion, in the cure of cystitis, removal of stone and even for exploration. The difficulty was not to close up the fistula, when it should be thought necessary, but to prevent its immediate spontaneous closure. He pointed out that when after tedious labor vesico-vaginal fistula threatened to form from sloughing or laceration, often it could be prevented by keeping the bladder washed out and free from irritating deposits; and even after one forms the same course would induce its rapid closure.

Dr. Skene, the President, made inquiry as to the methods for recognizing fissures in the neck of the bladder. He was in the habit of using a special endoscope for the purpose, but said it could be done also by inserting a glass test tube in the urethra and examining the walls with a small laryngeal mirror. He did not doubt that many if not all cases of tenesmus and neuralgia of the bladder were due to fissures or other pathological conditions about the neck. He had tried all methods of treatment—dilatation, incision, nitrate of silver of various dilutions—success and failure following all.

Dr. Skene is a model presiding officer. Armed and equipped at all points, from his own experience and from his knowledge of the views of others, by a searching system of suggestion and inquiry he brings the members out, and thus contributes largely to the interest of the meetings, as may be inferred from this condensed report.

In the selection of presiding officer for societies, it would be well if the choice were always made on account of culture and administrative ability, instead of the mere accident of long membership. A hint which, I trust, may influence the State Society at its May meeting.

As germane to this, but not as a part of the proceedings above sketched, I would mention that Dr. Emmet holds fast to the efficacy of hot water in the treatment of pathological conditions of the uterus and pelvic basin. The position of the woman while using the douche is of great importance, the simple dorsal decubitus or sitting posture being improper. An examination of the anatomical relations will show why this is; how that the uterine veins return their blood to a system of veins in the pelvic cellular tissue, which are without valves. They are easily distended, favor sluggish movement of the blood current, and in this condition easily maintain an inflammatory and congested state of uterus and ovaries.

Nature makes an effort at relief by hyper-secretions, which is useless to interfere with without recognizing and removing the cause. Here the hot douche aided by gravitation is eminently useful; and to secure gravitation of the blood from these overfilled veins, the woman must be in the knee-elbow position, or on her back with the pelvis raised high above the shoulders. To disregard this principle is to fail with the hot douche, even in cases to which it is particularly applicable.

ACADEMY OF MEDICINE, MARCH 7; Dr. S. S. Purple in the chair. Dr. Billington read an admirably written paper on Scarlet Fever, based upon 102 cases specially observed within the past year and reinforced by experience drawn from other sources and from the whole course of his own practice. The paper was evidently written for the purpose of establishing a theory, which it may not be said was absurd but certainly unsustained by sound logical reasoning.

The theses were as follows: 1. Scarlet fever is primarily a purely local throat lesion; 2d. Systemic infection follows and is consequent upon the resorption of *materies morbi* from the throat; 3. The nerve symptoms, (restlessness, vomiting, convulsions, &c.,) the pyrexia and the eruption are probably the result of reflex irritation; 4. No change in the blood can be demonstrated, and hence the idea of scarlet fever being a blood disease is a pure hypothesis.

The observations bore evidence of having been carefully and thoroughly made, and doubtless they add to the clinical history of the disorder, although they do not warrant the logical inferences presented. Dr. B. declares that the first symptom in scarlet fever always and invariably appears in the throat, the palatine arch and tonsils showing a diffuse or punctate redness. This precedes the fever and every other symptom, is purely local and probably due to the impact of the morbid agent, whatever it is, upon these parts. He maintains that the process initiated there is capable of setting up, in susceptible and irritable subjects, reflex disorders of every degree of severity, independent of the apparent mildness of the local lesion; and that even death itself, as in the so-called malignant cases, be may due to a profound cerebro-spinal disturbance caused by the angina, and not to the overwhelming blood poisoning and destruction of nerve centres, as is commonly held. It was not perfectly clear whether the author holds that the blood is subsequently poisoned from the products of the angina, for he distinctly states

that the entire train of symptoms, including the rash, could arise from nerve irritation alone; and adduced in support of this belief the phenomena of convulsions from dentition and worms, and the occasional urticaria from so simple a case as the ingestion of a single strawberry. But he likewise, in an earlier part of the essay, spoke of the morbid products of the angina as the cause of the later symptoms. Of course no support of this strange theory could be obtained in the bibliography of scarlet fever, though Meigs and Pepper, Ziemssen and Reynolds were quoted as in accord with the author upon certain semiological points. And as might be supposed there was little encouragement obtained from among the fellows of the Academy, only Dr. Peters venturing to agree with any part of the deductions, and he only to the extent of holding that the initial stage of scarlatina is always anginose.

Your correspondent ventures to express his belief that this even will not be universally or even widely accepted, as it is not borne out by experience, and he would here indicate that the common faucial redness and tonsillitis in children are liable to be regarded as early symptoms of scarlatina when they really are independent of it. It cannot be denied that primary angina does very frequently occur, but only as one feature in a scheme that has many features, and not as bearing any etiological relation to the others. And it is admitted likewise that the scarlatinal influence is capable of causing pharyngeal irritation to nurses and others who are long exposed to it.

Dr. Fordyce Barker could not agree with the conclusions of the writer, although the paper as a clinical record was an admirable and valuable one. He could not accept the doctrine that the prominent general symptoms were secondary to and the outcome of an angina. Scarlet fever was a blood disease *ab initio*.

The poison will survive potent for years (cases cited). Incubation—48 hours to two weeks. Sudden deaths occur from destruction of blood without any of the usual symptoms whatever. The relation between scarlet fever and diphtheria is uncertain; they may occur together, and may follow one another. Diphtheria was unknown in New York from 1815 to 1858.

Dr. Beverly Robinson pointed out that there was an anatomical difficulty in the ingrafting of contagium upon the velum and in the pharynx, as the very thick pavement epithelium covering these

parts prevent absorption. Repeated experiments to inoculate with diphtheritic products in the throat have failed, and inferentially this fact opposed itself to the theory that the system receives the scarlatinal poison in that locality.

Nothing new was developed in the treatment—quinine and cold bath were recommended for the pyrexia; chlorate of potassium, carbolic acid and lime water prove a useful mixture. Differences of opinion expressed as to the value of inunction; and its effect in reducing temperature and allaying irritation received no attempt at explanation. Your correspondent in reference to this has long held the theory that a portion of the pyrexia is due to the oxidation which ensues upon the surface through the capillaries of the inflamed part; and this will be diminished if they are protected by a thin coating of oil; and for its antiseptic influence upon the patient, and for preventing the diffusion of the contagium which resides chiefly if not wholly in the dermal exuviae, the oil should be carbolized.

It was held by all that scarlet fever is highly contagious, and may be conveyed by persons, but that the danger of its conveyance is lessened by free exposure to the atmosphere. When nurses go from cases of this disease into families where there are children, the entire dress ought to be changed and the personal ablution and disinfection should extend to the hair, particularly that of females which offers an excellent nidus for the poison.

Dr. H. G. Piffard presented a ready test for diabetic urine. It is the equivalent of Fehling's solution, and for its portability and promptness of action should be in the pocket case of every practitioner:

R Cupri sulphatis, gr. xij. ; Sal Rochelle, ℥ i. ; Sodii caustic. gr. xxiv. ; m. ft. pil No. xij.

The pills should be made up without excipient, as most of the substances used for that purpose give reactions similar to grape sugar. Dr Piffard carries these pills in a small test tube, which just fits in another tube in which the test is made.

Put one pill in a little water (℥ ss. to ℥ i), dissolve with heat, add a drop or so of the suspected urine; when if sugar is present the characteristic color instantly appears.

Our friends the Homœopaths are just now in the midst of an internicine strife of the severest character. Indeed their society may

be said to have essayed *auto da fé*, but it dies hard, and every now and then some convulsive motion in one of the minor members indicates that it was once under control of a living, although evil principle. One meeting passed a very wise resolution declaring that it is the duty of members to follow the guide of experience, independent of the *Similia* doctrine, that this indeed ought to be the basis of the practice, but that failing as it did so often, it ought not stand in the way of a cure for their patients by some other method.

It was developed in the angry words which were used that but three practitioners in the United States (two in Philadelphia and one in New York) understood the *Materia Medica*, and we may readily believe this after being told that the administration of such a simple thing as lycopodium develops 3115 different symptoms. What powers of observation, close analysis and memory this trio must have. I conceive it to be strictly possible that a practitioner may be honestly misled by the homœopathic doctrine, but it is a mistake, in my opinion, to exclude him from regular professional intercourse because he holds this error. But if while publicly professing to practice upon the *similia* principle he secretly employs ordinary regular remedies the case is entitled to no consideration professional or social. Indeed this argument was used in abusing those who caught patients with homœopathic bait and treated them covertly with allopathic (sic) physic, and legal opinion was quoted to the effect that if any man, professing to practice homœopathy, should lose a patient to whom, in despair of saving him with pellets, he had given remedies ordinarily accounted good by regular practitioners, he would be liable to prosecution.

This was a frantic effort on the part of the deep-dyed homœopaths to alarm the others. It is clear the majority of our heretical brethren are now seeing the absurdity to which a strict construction of the heresy leads them, and we ought to be ready to welcome them to the truth whenever convinced of their honest conversion.

In one way they have had an unspeakable advantage over us in offering free physic to their patients; and we should watch with interest the efforts which Drs. Piffard and Fuller are now making to provide easy, economical and accurate methods of dispensing real remedies in a compact and palatable form. Once give us our physic in pellets, triturates and satura'es, so that patients may be

spared the mental emotion of the present dosing and the petty annoyance of drug bills, then may we hope to see the homœopath lose the hold which his gratuitous globules have given him upon the credulous public.

I cannot refrain from calling the especial attention of your readers to the action of the United States Congress in repairing, so far as lay in its power, the gross injustice which in the troublous time of war was inflicted upon that eminent Surgeon and Neurologist, Dr. Wm. A. Hammond. The congratulations in medical circles over this event is universal, for it has long been well known that the proceedings of the court by which he was removed from the office of Surgeon-General were instigated through low considerations, of a personal and political nature, and that the charges were sustained through a gross perversion of facts, possible only in those days when the government was ready to seize upon any one (the higher in station the better) as a propitiatory offering to the fury of public disappointments.

To Dr. Hammond's marvellous ability is doubtless due the present superior organization of the medical department of the army: for he entered office without a single stone to build upon, laying the foundation and indicating the design as it now exists of what is a model for all departments of the government.

I trust to be able at no distant day to furnish your readers with a sketch and engraving of this eminent Surgeon. DER.


NORTH CAROLINA doctors would do well to remember that persons practising medicine in this State since 1859, cannot collect their bills legally until they obtain the license of the STATE BOARD OF MEDICAL EXAMINERS. Executors of several estates have to our knowledge refused payment of the doctor's bill on the ground that the practitioner was not legally licensed. This license is a protection to both patient and physician.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DEROSSET, M. D., 15 West 26th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

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THE MANAGEMENT OF THE MEDICAL SOCIETY OF NORTH CAROLINA.

For a number of years the management of our State Medical Society has not been such as to earn the approval of the body of the profession, principally we think because of the very grievous fault on the part of this very majority of the profession who are more apt at fault-finding than in lending their aid to make the Society what they conceive it ought to be.

It becomes our duty though in all candor to say that the management of the affairs of the Society has been too narrow. We mention in particular that the selection of Committees at our last meeting in Salem bore every evidence of having been managed with too little regard for the interests of the majority of members, who unfortunately arrived on the second day of the meeting. The working of the machinery seemed to be to carry out certain ambitious purposes, and this attained the literary offerings which cost so much labor to the working members were complacently tolerated.

This may be too harsh a judgment, but we are speaking the opinion of many members besides ourselves, uttered while the occurrences were fresh, and repeated to us by letter and personally since.

Committee making should be entirely subordinate to professional work, and should be as far as possible delayed until the presiding officer has full time to estimate the fitness of his appointments. The desire of the President to do this is too often defeated by motions, ill-advised and hasty, from members who are anxious to see the work rushed through. These are some of the glaring defects which deter some of our best physicians from joining heartily in the work with us, while apathy seems to have taken possession of very many more.

The remedy is obvious. Let each member go to the Society with some definite amount of work, showing the result of some of his professional experience for the year. Let each one be intent on the good he can do the Society and the aggregate of the result will earn for it such a position that membership will be sought by those who could not before see anything in us.

We have yet achieved no such great results that we can afford to manœuvre for the honors. Members with such aspirations would do well to consider how much better it would be to devote their talents to elevating the society.

The faults we have briefly mentioned are not confined to us, but seem to run parallel with those complained of in England, and we quote the following for the delectation of all whom it may concern, about the British Medical Association :

* * * "A small party seemed to have ruled the business, * * and controlled the organization of the Association. Every year at the great meetings and feasts of the Association, they have mutually admired each other on the platforms and at the high tables; and they have apparently succeeded in persuading themselves that they are not only in the highest degree useful as well as ornamental, but in a position to act in the most autocratic manner, independently of the wishes and feelings of the members at large."

Our Society was chartered by the State and is for the regular profession of the whole State, and we must see to it that the talent which has been entrusted to us is properly employed. We have assurances of better things at our next meeting in May, and we believe it will prove to be the best meeting for many years.

UNIFORM QUARANTINE.

We give below some extracts from a very timely and earnest speech in the House by Hon. W. H. Felton, of Georgia, on the subject of a uniform national quarantine, and regret we have not space to say more, but hope to return to the subject again.

“The Committee on Commerce has considered the bill, seeking to establish a general and uniform system of quarantine by the Federal Government, the direct object being to prevent the introduction into the United States of contagious or infectious diseases, and after a thorough investigation they report unanimously in favor of its passage.”

We have not seen the bill, but its objects are to conduct the quarantine upon such sound principles as will be merciful to the pestilence-stricken persons arriving at sea-ports, and making intelligent and safe disinfection of vessels and crews in the interests of sea-port cities as well as commerce.

“What has science, in the management of quarantine, accomplished in this direction? Let us take the quarantine at New York city, as described by Dr. Vondërpoel. In summer, when a ship arrives with yellow fever on board and from a port in which yellow fever prevails, the vessel discharges her cargo in lighters in the stream before going to dock, and is cleansed carefully, and her bilges washed, besides being thoroughly disinfected and ventilated, and by their hospitals and arrangements on Hoffman Island and Dix Island, and by placing those who have been exposed under circumstances favorable for the suppression of the disease, and those attacked being treated for it in a place suitable for cure, there results the least detention and fatality possible under the circumstances.

“All the advances made in the New York quarantine have had for their motive the reduction of the detention and annoyance of delay in cases of disease, while at the same time commerce should be as little embarrassed as possible. The health officer of the port is sustained in all his official acts by the commercial interests of New York which find in his pass a protection from the dangers to trade which would follow a commerce in which there was no sanitary restriction. Thus the apparently incongruous interests, quar-

antime and commerce, are united at this port upon a system which is satisfactory to and adequate for both."

The bill as we understand it is founded upon a careful examination of the quarantine, by Dr. John M. Woodworth, of the Hospital Marine Service. His views upon the subject have been favorably received by the profession as far as we are aware.

MR. FELTON'S appreciation of the importance of a reformed quarantine is not more grateful to us than the manly words he has for the medical profession.

"I know it is customary with some to depreciate the suggestions of medical and sanitary science, denouncing them as empirical and the dreams of theorists.

"Let us remember they have always been in the forefront of progress, and that all which has been done for the prolongation of human life has come from that science: quarantine, vaccination, improved drainage, disinfectants, prophylactics, hospitals, character and treatment of disease; besides, it makes, subsidiary the whole world of scientific research, and when the nations are lifted from the pit of their ignorance and placed upon the pillar of their grand future no branch of human learning will have contributed more to its glory and happiness than medical science.

"Let us make the experiment, and if we fail it will be in one of the noblest efforts that ever science suggested or humanity prayed for."

REVIEWS AND BOOK NOTICES.

The Puerperal Diseases.—Clinical Lectures delivered at Bellevue Hospital. By FORDYCE BARKER, M. D., Clinical Professor of Midwifery and the Diseases of Women in the Bellevue Hospital College; Surgeon to the New York State Woman's Hospital, etc., etc. Fourth edition, 8vo, pp. xiv, 526; D. Appleton & Co., New York. 1878.

The rapid sale of three editions, the appearance of a fourth, its republication in Great Britain and its translation into several for-

foreign languages entitle this work to more than a passing notice at our hands. Aside from its intrinsic merit the unique nature of the work alone would ensure for it a great popularity ; for although the subjects it treats of have been ably handled by various authors yet nowhere else, in the whole field of medical literature, do we find them so conveniently collated and arranged under one cover. We should regret, however, to convey the idea that the chief value of Dr. Barker's book lies in its convenient form or in its special nature, since each chapter possesses features which if it stood alone would stamp it as the product of one who had much to say and said it well:

Embracing twenty chapters, or lectures, as he prefers to call them, it covers every conceivable condition that may be incident to, or follow as a consequence, upon parturition; and so thoroughly has this intent been pursued that even the purely surgical domain of gynecology has been entered—an error (if one it be), which only adds additional value to the work. Passing over the earlier chapters on puerperal convalescence, hemorrhoids, laceration of the perineum, &c., all of which, however, are ripe with the author's accumulated experience, and valuable in removing the fetters which tradition puts upon our practice, we stop to consider those topics which have for a long time been, and still are the subjects of heated controversy. It is in these that Dr. Barker exhibits to the best of his mental *aplomb*, and the wide range of his knowledge, although it is possible we cannot hold with him upon some minor points in causation and pathology.

In Chapter VI, on Puerperal Convulsions, which follows properly that on Puerperal Albuminuria, the etiological relation of these two conditions are pointed out, and a disbelief expressed in the discarded theory of Frerichs, of the conversion of urea into carbonate of ammonia. The surmise that to urea itself, as a narcotic poison, are to be attributed the phenomena of convulsions, although seemingly borne out by the experiments of Dr. Hammond and others, is hardly in accord with the fact that narcotic poisons do not, as a class, produce convulsions like those of the puerperal period ; nor is it supported by the result of the experimental injection of large quantities of urea into the circulation of the lower animals. Venesection is highly spoken of under certain conditions, upon the theory that the absolute amount of urea in the

blood may thereby be greatly lessened ; and few practitioners there are who cannot recall cases of striking benefit from the timely abstraction of blood ; but there are others also who will not fail to see that the Doctor's explanation is based upon an unsustained hypothesis, and point to aggravated cases of convulsions which recover without being relieved of one grain of the offending urea. Chloroform, morphia, bromides and purgatives, are all recognized at their full values ; but chloral hydrate is condemned, as it is suspected of increasing instead of allaying nervous irritability. Liebreich's theory of its conversion into chloroform, the author rejects, because its physiological effects are so unlike those of chloroform (he does not say whether administered *per os* or by inhalation), and supports this view deduced from his clinical observations, by the negative results of Dr. Amory's experiments in searching for chloroform in the urine, after the ingestion of chloral. The conclusions of such an acute and analytical observer may be accepted perhaps without cavil as to the use of chloral in the nervous excitations of the puerperal state, but remembering the value placed upon this agent by alienists, and by Dr. Barker himself, it is well to be guarded against giving its condemnation too wide an application. Although we may not use, according to our author, chloral for the relief of nervous and muscular irritability, as expressed by the convulsive state, it still holds the high position it has always held as a safe and pleasant soporific.

The closing chapters in the book cover the various inflammatory and febrile affections of lying-in women, and constitute its most interesting part.

Every point is stated with admirable perspicacity and the differentiation between conditions so nearly akin as to lead to their frequent confusion, is made clear enough to enable any one, who studies our author closely, to discriminate with the utmost ease. The clinical histories and table given show how important it is that hourly accurate records should be kept by a competent attendant, and the author, although burdened with the labor of a vast metropolitan practice (for he is no contracted specialist but a general practitioner in its fullest sense) has indicated how he has thought it necessary to pass whole nights under the same roof with his patients, to meet those critical moments when life hangs poised in the balance.

On page 352, in speaking of mercurials in puerperal peritonitis, Dr. Barker expresses his astonishment that Hervieux, in his great work, should recommend inunctions of mercury, and says that "the so-called antiplastic and sorbefacient action of mercurials have no foundation in fact." Perhaps he had in view here active inflammatory formations and phlegmonous hyperplasms of an acute nature, and if so the statement is fully justified, for the use of mercury to prevent or limit these is absolutely without effect, and hence is to be rejected in puerperal peritonitis. But its beneficial influence in relieving the periosteal thickenings and other hyperplasms of syphilis, for example, is too well established for us to deny to it *all* antiplastic or sorbefacient action.

We apprehend that no portion of this book will excite a more useful interest than that devoted to the question of vascular sedatives, and think that the point is fully maintained of their adaptability to the treatment of puerperal fevers. The extreme stimulant, (or as we might call it) *astheniaphobic* school doubtless stand ready for this issue, and to demonstrate the author's alleged inconsistencies in theory and practice, basing their criticisms upon passages and statements isolated from the context. Thus on page 350, we find written: "the nervous forces are generally in a state of extreme prostration in puerperal peritonitis;" and on page 353: "puerperal fever is a disease which tends rapidly to destroy life by asthenia." And yet, say the stimulant men, our author, in spite of this, uses "as his sheet anchor, a remedy which is markedly depressant!" We accept the issue as thus made up, and think that it will be easy to show that there is not a single reason involved in what Dr. Barker has written to militate against the use of *veratrum viride* in the condition for which he so highly extols it. And it seems to us that only a misinterpretation of symptoms or a failure to recognize the relation of *veratrum viride* to the cardiac nerve supply, could enable any one to draw a parallel between the effects of this drug and those of venesection. This is hardly the place to re-open the question of exaltation or depression of the vital forces, as a primary concomitant condition in disease generally. We know that the tendency is uniformly to a depression. But the physiological *quantum* of vital power is not to be indicated by excessive or defective action of any one function, but only by the proper symmetrical expression of all. And so we may have a function exalted in

its working not from actual loss of vital force, but through incidental and it may be exogenous causes, the prolonged operation of which certainly tends to exhaustion.

A simple instance of exalted action is the quickening of the pulse from emotional disturbances. Is it to be supposed here that this is due to loss of vital force? Evidently not; but equally evident it is that the tendency is towards a depression which will follow, if the cause remains long in operation.

It cannot be more distinctly pointed out than Dr. Barker has done it that veratrum viride is wholly unsuited to the state of exhaustion and collapse, indicated by feeble and rapid throbs of the heart and arteries. Here the conditions are the outcome of causes widely distinct from those which give rise to a vigorous, quick and frequent cardiac systole, and a hard corded and tense arterial pulse. The one calls for the use of vascular sedatives to calm the excessive irritation of the cerebro-spinal centres, by lessening the amount of hot blood sent to them, and the other demands the employment of diffusible nerve stimulants and cardiac tonics, to keep up a more abundant supply to the brain and cord, that their nutrition may be sufficient to afford the innervation necessary to all the functions which are essential to life. Of all the vascular sedatives we are quite sure that none are so well suited to the puerperal fevers as veratrum viride. It certainly has no general depressing influence, but a special effect upon the inhibitory cardiac nerves, quieting the excited heart, rendering its pulsations less frequent and more steady, and without diminishing the force, or, rather, the completeness of its contractions. When the arteries are small, corded and tense, it renders them fuller, softer and more compressible, and relieves the strain which their resistance entails upon the cardiac muscle. It is in no sense a depressant, like venesection, but on the contrary, performs the rôle of a tonic; and to those who are unable to reconcile the terms, sedative and tonic, as applicable to the same agent, we would state that the ideas are not really at variance, for there are many agents, of which veratrum is one (and for the puerperal fevers it is *facile princeps*), whose influence in giving tone is due to the sedation they bring to some one or other excited function. For if any is excited under the lash of a morbid cause it unduly depresses others whose full action is essential to that harmony which is the highest expression of vitality. No more than this can be said

for quinia, which the opponents of vascular sedatives readily admit is theoretically as well as practically, a suitable remedy for the frequent pulse and pyrexia of the febrile state. And like veratrum, quinia if pushed to its toxic verge equally in degree if not in kind induces a general depression of the vital force. And so with alcoholic stimuli, with which the armamentarium of some therapeutists seems to be inseparably bottled up. Since we now recognize that disease is not an entity, not a *daimon*, to be dealt with, so should we hold of *vital force*; it is not an actual thing, but only a convenient expression to denote the harmonious co-operation of many functions. If one is unduly exalted by the stimulus of a morbid principle, the general physiological relation is disturbed, and upon *a priori* grounds, it would seem proper to employ sedation to counterbalance the excess which existing in one tends to a total extinguishment of action in all. A sedative, therefore, applied to one function, may, in its effect upon all, be a true *tonic* to the vital force.

After all, the results of the treatment of puerperal fever and peritonitis with veratrum may well be compared with those of any other method. Its value is largely enhanced by association with morphia, as an adjuvant to secure rest and freedom from pain. The two drugs seem to promote the beneficial effects of each other, and reciprocally to restrain their respective pernicious influences, rendering possible the administration of enormous doses of each. Thus, the tables in the book show that the diurnal dose of morphia sometimes approximated eighty grains!! But it must also be recognized that some diseases particularly puerperal peritonitis, develop a great toleration of both morphia and veratrum. A striking illustration of the benefit of combining remedies is given in a case in which neither brandy nor veratrum alone would lessen the fever, but when in combination the beneficial effects of the two, became apparent from the very first dose.

We have not space to enter in the examination of other valuable features of this book. The author has done everything well and placed us under lasting obligations for the draughts drawn from the deep and never-failing well of his own experience, and for tapping for us the currents of knowledge as they flow from every source throughout the civilized world. He gives due acknowledge-

ment in the text for views of other writers, but has not swelled the pages of his book by a pedantic display of bibliographic references.

His style is lucid, simple, direct, and his language never leaves us in doubt as to his meaning. We note also with pleasure his reliance upon the efficacy of sound therapeutics, a refreshing consideration in his great field where the more meretricious knowledge of pathology plays such a predominant rôle.

The publishers have made the study of these pages easy, printing them in clear large type, and upon paper of a pleasing tint.

MEDICAL ANNOTATIONS.

THOMAS' OPERATION, (LAPARO-ELYTROTOMY) AS A SUBSTITUTE FOR CÆSAREAN SECTION.

The following description is by Dr. Thomas :

"The operation was simple and consisted of making an incision through the abdominal walls from the spine of the pubes to the anterior superior spinous process of the ilium, lifting the peritoneum, making an incision through the upper portion of the vaginal wall, lifting the body of the uterus over to the opposite side, and then, through the dilated cervix, delivering the child by version, by forceps, or by extraction. Delivery was to be effected by version in arm presentation ; by forceps when the head presented ; and by extraction in breech presentation. Hemorrhage was one of the things to be feared in the operation ; but in five cases no hemorrhage had occurred, and why should it occur in future operations ? But, even admitting that hemorrhage occurred, it became a question whether the risks should not be taken, because the risk of peritonitis and shock following other operations were avoided. The dangers of Cæsarean section were peritonitis, metritis, hemorrhage, shock, incarceration of the intestines in the uterus and septicæmia. By the operation of laparo-elytrotomy the danger from peritonitis, metritis, and incarceration of the intestines was entirely avoided, and, in a great degree, the danger from septicæmia and shock was diminished. The operation might be followed by hemorrhage, and, in place of peritonitis, cellulitis might be developed. Dr. Thomas did not regard laparo-elytrotomy as yet an established standard operation, but he did regard it as an operation sufficiently tested by experiment to deserve a careful consideration at the hands of the medical profession."—*Medical Record*,

Number of 'Thomas' operations already performed,	5
Number of mothers now living,	3
Number of children delivered alive,	4

Dr. T. Gaillard Thomas concludes a paper on Laparo-Elytrotomy in the *American Journal of Obstetrics* for April, with the following summary :

1st. The operator should be provided with a pocket-case of instruments, ether, Barnes' dilators, and Paquelin's thermo-cantery, or, in place of it, ordinary cautery-irons.

2d. The patient having been etherized, she should be placed on a firm table, and the os fully dilated by Barnes dilator.

3d. The abdominal wound should be made; the peritoneum should be lifted; the vagina opened; and the child delivered by version, if the head or arm present; by extraction, if the breech do so.

4th. The placenta having been delivered, and the uterus caused to contract firmly, the iliac fossa should be cleansed by a stream of warm water, introduced through the abdominal wound, and escaping through the vagina; and if the hemorrhage exist, ligatures should be applied, if possible through the abdominal wound, to the bleeding vessels. Should this prove impossible, the vagina should be distended by a large metallic speculum, and the lips of the abdominal wound being widely separated, the bleeding points touched by the actual cautery carried down from above. Should this fail, the uterus should be made to contract firmly by ergot, and both vagina and iliac fossa being thoroughly tamponed with cotton soaked in water and squeezed, but free from any styptic. Then a broad band of adhesive plaster, and a compress should be applied over the lower portion of the abdomen.

5th. Should no undue hemorrhage occur, the abdominal wound should be closed by interrupted silver sutures; the vagina should be syringed out every five hours with warm carbolized water, the nozzle of the syringe being carried through the vaginal opening, and the fluid forced through that in the abdomen. The patient should be kept perfectly quiet, nourished by milk and animal broths, and kept free from pain by opium.

ACNE AND ITS TREATMENT.

The following abstract is from one of a course of lectures now being delivered by Mr. Erasmus Wilson. The lectures are published regularly by the London *Medical Examiner*, which by the way is a journal which satisfies the needs of the busy physician in a way that has not yet been equalled by any of its more pretentious contemporaries.

“To be exact, the definition of acne ought to be :—a folliculitis developed at puberty, consisting of a conical red pimple which

either runs on to suppuration or degenerates into a chronic tubercle or absces. But as every follicle of the body, at every age, is susceptible of inflammation, and as the inflammation must necessarily pursue in all the same general pathological course, the error has arisen of calling almost every papular or pustular folliculitis, developed in an isolated form upon the skin, an acne. Thus it is that a folliculitis of adult life making its appearance on the face, is termed 'acne rosacea;' and the papular folliculitis which shows itself upon the system is permeated with the iodide or bromide of potassium or where tar has been employed either internally or externally, has also received the names respectively, of iodine acne, bromide acne, and tar acne.

"Acne requires for its therapeutic management a stimulant local treatment; together with a tonic and nutritive constitutional regimen. My own *local treatment* consists in friction combined with pressure and kneading of the skin, followed by inunction with *hypochloride of sulphur* ointment. To effect this the skin should be firmly wiped with a cloth, so as to break the heads of the pustules, bruise the papules and empty the follicles of their contents. This should be done at night. Then the ointment should be needed into the papules with moderate force and in the morning the skin should be washed with a profusion of soap and cold water. As it is no part of the treatment to increase the pain and suffering of the patient, this little procedure should be performed with judgment; but in general as it is left in the hands of the patient, it is not likely to be executed immediately. It should be repeated every night and kept up in the case of the pimples and tubercles until the whole have disappeared. That is to say the ointment should be limited as much as possible to the pimples and tubercles solely. Occasionally we may see reason, where the treatment appears to be too violent, to suspend it for a few days or longer; but the principle must be rigidly adhered to. Sometimes I relax the treatment and substitute the zinc ointment; but as soon as the skin will bear it, the latter should be resumed. In the treatment of acne anything like half way measures will fail.

"Friction and pressure discharged many of the follicles, but where there is a black comedonous plug it may be pinched off with the forceps, and squeezed, and for the puncture of serous or purulent sacs, a flat needle is to be preferred to a lancet.

"*Constitutionally* the nutritive power must be improved. Meat should be allowed in moderation three times a day [allowance should be made in this respect to the difference between our climate and that of England.—Eds.] and good sound beer for dinner and supper. Next we may propose according to the constitution of the patient:—cod-liver oil, iron, quinine, the phosphates of lime and iron, nitro-hydrochloric acid with a bitter and arsenic. [Trommer's or Dukehart's Extract of Malt with or without cod-liver oil, we can add to the above with confidence.]

"The special internal remedy in most of these cases is my ferro-arsenical mixture, containing three minims of arsenical solution to the drachm and administered at the end of a meal three times a day. While for external use, my compound hypochloride of sulphur ointment is the paragon of a remedy."

WILSON'S ACNE OINTMENT.

R
Hypochloride of sulphur, 3 ij.
Subcarbonate of potash; gr. x.
Lard, 5 i.
Oil bitter almonds; gtt. x.
M.

THYMOL A GERMICIDE AND ANTISEPTIC.

The introduction of salicylic acid as an arrester of fermentation and antiseptic while it has disappointed the sanguine, has opened the way for seeking similar or greater properties in the vegetable world. Oil of thyme and its active principle thymol have been found by Bucholtz and Bälz in Germany to arrest fermentation and destroy bacteria. It is procured from the volatile oil of horse-mint (*Monarda punctata*) as well as from the common thyme (*Thymus vulgaris*.)

Its present source according to the *Medical Times and Gazette* (March 2d, 1878) is by distilling the seeds of *Ptychotis ajowan* an Indian umbellifer, which contains from 5 to 6 per cent. of their weight of this body. Its anti-putrescent properties were first distinctly pointed out by Bouillon and Paquet, of Lille in 1868. Dr. Lewin, of Berlin, was the first to point out its antiseptic properties, in the present surgical sense of the word. He showed that a solution containing one part of thymol in 1000 was sufficient to arrest saccharine fermentation, retard lactic fermentation, and arrest decomposition. It was the same chemist who showed the harmlessness of thymol where internally administered, and its power over fermentation in the stomach.

The chief value claimed for it now is its advantage in some respects to carbolic acid in the Lister method of antiseptic surgery. A thymol gauze is made by impregnating the gauze with a mixture composed of 1000 parts of bleached gauze, 500 of spermaceti, 50 of resin and 16 of thymol. (*Cosmoline* would make a good substitute for the spermaceti.) The advantage which the thymol has in this preparation is that it produces no irritation. It must be borne in mind that thymol is more volatile than carbolic acid.

Like all new drugs its cost is at present far greater than carbolic acid being \$15 for two pounds and a half in the German market.

Thymol reduces the temperature in typhoid fever and acute

rheumatism. It seems, however, that this new remedy will be rather an external than an internal one.

Oil of horse-mint which contains thymol, has enjoyed a reputation for many years in the South as an external application in rheumatism. Sometimes it goes by the name of "Origanum." (Thurber) corrupted into "Rignum" old-field Rignum tea as a sudorific is a choice remedy among the "natural" physicians.

Dr. Wm. T. Bull, of (*Medical Record*) gives the following formula for a solution of thymol :

R Thymol, 16½ grs. ; Alcohol, 3 iij. ; Glycerine, ȝ ss. ; Aquæ, ȝ xxxjv.

VALUE OF PEPTONE.

When an albuminous substance is digested with hydro-chloric acid and pepsine at the temperature of the body it becomes converted into "peptone"—that is to say, it has acquired properties which it had not before, and has ceased to be precipitable by heat or dilute mineral acids, though its chemical composition is apparently the same as true albumen. Professor Schmidt, of Dorpat, has shown that by removing the salts from albumen by dialysis the latter ceases to be coagulable on boiling, but recovers the property of coagulation on the restoration of the salts.

Dr. Adamkiewicz has tried to answer the question of the analogy of the behavior of albumen and peptone in the body, and its value as a food. He concluded that peptone is better suited than albumen for entrance into the animal juices, and elaboration by the tissue cells. Other experiments proved that peptone increases the body-weight as decidedly as serum-albumen and egg-albumen. Hence, as peptone is as nutritious as albumen, and at the same time more readily assimilable, it follows that, as Adamkiewicz expresses it, "there must be indications for its therapeutic use." In the Berlin Charité Hospital, a female lunatic who had previously vomited everything she took, was treated with enamata, each containing peptone equivalent to about an ounce of meat. This quantity was absorbed by the bowels in a very few minutes, and as long as the enamata were continued the patient ceased to go to stool—a striking proof of the complete assimilation of peptone. Another woman similarly ceased to vomit when all albuminous food was withdrawn from her diet and replaced by peptone.—*Medical Times and Gazette*.

FILARIÆ IN THE BLOOD.

Several very interesting extracts by Dr. Manson, of Amoy, from the *Chinese Customs Gazette* have appeared in the *Medical Times and Gazette* on certain hæmatazoa. The life-history of these blood-

worms has not yet been satisfactory studied, and it is, perhaps, premature to say anything about them at present. At a late meeting of the London Pathological Society, Mr. Coles showed a specimen of "Lymph-scrotum" from a patient in China with a history of the case. The condition was associated with the presence of *filariæ* in the blood, which organisms Mr. Coles described. Sir Joseph Fayrer said that the pathology of "lymph-scrotum" was first correctly described by Dr. Van Dyke Carter in 1861. He himself had described the same disease under the name of "nævoid elephantiasis," and suggested that it might be due to the presence of a nematode worm. Very soon after, *filariæ* were discovered in the fluids. The *filariæ* were of interest pathologically as well as surgically, for it was probable that cachectic malarial diseases would be found to be related to them.

Dr. Cobbold said that Wucherer, of Bahia, had just discovered the *filaria* in chyluria. Two years later, Lewis found it in the urine in chyluria; and two years afterwards, Dr. Cobbold himself found it in a case from Natal. Still later Lewis made the discovery of the worm in the blood. But it was Bancroft, of Australia, that first saw the sexually-mature form. Dr. Bancroft, he understood, was now able to diagnose filarial disease in patients from the presence of small tumors in the arm-pits, face, etc. In one of his letters he had remarked that he should not be surprised if it were found that mosquitoes sucked up the *filariæ*. He had failed, however, to prove this; but Manson, of Amoy, had really and truly observed this, and had traced the various stages throughout. In one mosquito, Manson had counted as many as 120 *filariæ* in the stomach. Within its host the *filaria* threw off its outer tunic and became transformed into a sausage-like body; and thence it passed into a third form. Having fed upon blood, mosquitoes betook themselves to water, on the surface of which they deposited their eggs, living for five days only. By the end of this time the *filariæ* within them reached the length of one-thirtieth of an inch. From the water they found their way into man.

Mr. Coles also showed specimens of *filaria immitis* from the heart and œsophagus of a dog. The mature female worms were from eight to thirteen inches long; the male worm from five to seven. The worms resided in the right ventricle and extended thence through the valves, surrounded by a clot of grumous blood. About 15 per cent. of the natives of Amoy were believed to be infected with them. Dr. Cobbold thought the *filaria immitis* was not so harmless as it was represented to be. Mr. Coles said that *filaria sanguinolenta* resided in the œsophagus and aorta, whence it made its way into the neighboring structures setting up pleurisy, spinal disease, etc.—*Medical Times and Gazette*, March 16th.

COLLECTANEA.

M. PIERRE PICARD will succeed CLAUDE BERNARD in the chair of Physiology, at the College de France. M. Picard was for a long time Professor Bernard's assistant.

Renal Calculus containing Indigo.—Among the rarities presented to the March meeting of the London Pathological Society was a calculus containing indigo. The President, Dr. Murchison, said it was the first indigo-calculus on record.

Professor Annandale presented a patient at a recent (March 6th) meeting of the Edinburgh Medico-Chirurgical Society, who had suffered from writer's cramp, and who had been treated ineffectually by galvanism, and strychnia internally. Following the treatment of Dr. Bianchi, of Naples, he used subcutaneous injections of a solution of strychnia every second day. He used in all nine injections, of a solution the strength of the *Liquor Strychniæ* of the B. Ph.,* commencing with six minims and increasing the dose one minim until it reached ten or twelve minims. The patient had had his strength restored, and could now write for a considerable time.

ACKNOWLEDGEMENT.—We did not discover until too late to be inserted in the proper place, that we omitted to say, that we are indebted to that excellent medical periodical, the *New Orleans Medical and Surgical Journal*, for the AMERICAN MOUNTAIN SANITARIUM FOR CONSUMPTION.

Prevention of Puerperal Fever.—The English medical journals call the attention of the profession in that country to what obstetricians are doing so well in Germany, viz: reducing puerperal infection to the minimum, by rigid adherence to cleanliness both on the part of the physician and the patient, by "Listering." (The *Medical Times and Gazette* says in Germany the verb *Listern* has been coined to express the use of Lister's method). The hands and instruments of the physician are primarily and thoroughly cleansed, and after delivery the vagina is washed out with a two per cent. solution of carbolic acid, the injections being kept up thirteen days, at increased intervals.

Spiegelberg at Breslau has carried out the antiseptic practice since 1874, and has had only *five* deaths in *nine hundred* labors. "Listering" has grown so rapidly with us, that bad odors in the lying-in chamber are confined to cases managed by midwives. It would be vastly useful if this practice would radiate to every quarter.

*Ten minims equal one-twelfth of a grain of Strychnia.

BOOKS AND PERIODICALS RECEIVED.

The City Record. New York, March 7th, 1878. Giving the Annual Summary of the Bureau of Vital Statistics of the city of New York ; From John T. Nagle, M. D., Deputy Register of Records.

What Am I ? A valedictory address of the graduates of the Medical Department, University of Louisville, February 28th, 1878; By Professor J. M. Bodine, M. D.

The Annual Medical Directory of Regular Physicians in the State of Illinois for the year 1878 ; F. A. Emmons, M. D., Editor and Publisher.

Proceedings of the Louisiana State Medical Association, 1878.

The Etiology of Intemperance ; by Professor Charles W. Earle, M. D., Chicago, 1878.

Scarlatina in Chicago, particularly the epidemic of 1876-7 ; By Professor Charles W. Earle, M. D., Chicago.

Notes on Trees and Tree Planting ; By C. S. Sargent, Director of the Botanic Garden and Arboretum of Harvard University.

Etiology of Enteric Fever ; By Professor J. L. Cabell, M. D., University of Virginia. Reprinted from Transactions of American Medical Association for 1877.

Studies in Pathological Anatomy ; by Francis Delafield, M. D., Adjunct Professor of Pathology and Practical Medicine, College of Physicians and Surgeons, No. 1 ; Wm. Wood & Co, 27 Great Jones St., N. Y., February, 1878. Price \$5 00 a year. Single number 50 cents.

Trastornas del Aparato de la Vision en las Fiebres Paludeas, &c. ; Per el Dr. Juan Santos Fernandez, Habana, 1877.

Illustrated Catalogue of Surgical Instruments and Appliances ; Codman & Shurtleff, 13 & 15 Fremont St., Boston, Mass., February, 1878.

Batley's Operation ; By J. Marion Sims, A. M., M. D. Reprint from British Medical Journal, Dec., 1877, 31 pp. 8vo. From the Author.

Compulsory Vaccination. The establishment of a uniform system of Vaccination for all citizens and inhabitants of the State of Louisiana ; by Prof. Joseph Jones, M. D. From the New Orleans Medical and Surgical Journal.

Spontaneous Combustion ; By Professor Joseph Jones, M. D.

Report of a Commissioner of Fisheries of Maryland, January, 1878, pp. 125. Six lithograph plates. Baltimore ; Printed by King Bros., 162 West Baltimore Street.

Address before the Rocky Mountain Medical Association, June 6th, 1877. Containing some observations on the Geological Age of the World, The Appearance of Animal Life upon the Globe, The Antiquity of Man, and the Archæological Remains of Extinct Races found on the American Continent ; By J. M. Toner, M. D., Washington, D. C., 1877.

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

DUKEHART'S EXTRACT OF MALT has already earned a reputation wherever used by physicians, and a trial of it will convince you that it is all it pretends to be. See advertisement.

THE BELLEVUE HOSPITAL MEDICAL COLLEGE has made some changes, due to the death of the lamented PEASLEE. Read their advertisement.

MENSMAN'S TONIC, is a genuine tonic in the strict sense of the word, besides being an elegant preparation, grateful to the most delicate stomach.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA,)
 SECRETARY'S OFFICE.)
 LITTLETON, N. C., April 17th, 1878. }

 *The Meeting of this Society will take place in Goldsborough on Tuesday, the 14th of May, 1878.*

Arrangements have been made with the Railroads to pass physicians attending this meeting at reduced rates, but it will be well for those gentlemen intending to attend to apply at least a week in advance at the ticket office, so that there may be no mistake about proper orders having been issued from the offices of the General Ticket Agents.

THE BOARD OF MEDICAL EXAMINERS meet at the same time and place. The license fee of the board, as fixed by law, is \$10.

THE STATE BOARD OF HEALTH will have important matters before it and hope to establish this new work upon a firm basis.

DR. CHAS. DUFFY, Jr., of Newbern, will read, by appointment, a paper on "*Diphtheria and its treatment.*" Embracing the following heads: "*Determining Characteristics,*" "*Etiology,*" "*Isolation, Disinfection and Fumigation,*" "*Identity or non-Identity of Diphtheria and Croup,*" "*Treatment including the advantages of Tracheotomy.*"

Every arrangement has been made for a pleasant and profitable session, and a full attendance is desired and expected.

L. J. PICOT, M. D., Secretary.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D., }
THOMAS F. WOOD, M. D., } **Editors.**

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ORIGINAL COMMUNICATIONS.

TREATMENT OF CHRONIC AURAL DISCHARGES.

BY JULIAN J. CHISOLM, M. D.

**Professor of Eye and Ear Diseases in the University of Maryland,
and Surgeon in charge of Baltimore Eye and Ear Institute.**

A Paper read before the Baltimore Academy of Medicine.

Chronic aural discharges have so long been an opprobrium to the profession that it has become the habit with many physicians to ignore their treatment. Let it alone and the child will outgrow it, is the stereotype professional phrase which I hear daily from parents who have exhausted their patience in awaiting this outgrowing. I have heard of cases of aural discharge lasting through a long life, literally from the cradle to the grave and never were discharged. These cases had also sought relief from more than one medical source and had derived great consolation from this oracular opinion delivered with that positiveness that ignorance alone engenders. Let it alone, it is a good vent for the system! Stop it and your lungs will suffer! Or if the patient be old enough he is made to

rejoice in the knowledge that in this discharge resides his immunity from apoplexy, and he is thoroughly scared from seeking relief from this annoying companion, by having these words ever ringing in his ears. Check it at your peril.

The explanation for these two false positions so constantly assumed by even good practitioners is found in the recognized difficulty with which chronic otorrhœa is checked, even when carefully treated; and the impossibility of controlling it under the routine advice given to patients of syringing their ears, without being told how to do it.

If the pathology of aural discharges be understood and the rough anatomy of the ear kept well in mind, much of the difficulty which surrounds this important medical subject can be dispelled, and the successful treatment can be made comparatively easy.

In order to lay down a few simple rules for our guidance in the treatment of otorrhœa, we must recall the fact that the hearing apparatus has three natural divisions. The external ear and meatus from the drum-head out is covered by skin, continuous with that of the face, and is, therefore, a dermic tube, liable to the diseases which affect the skin proper. The middle ear, or drum cavity, with its mastoid cell appendages, is a diverticulum from the throat, and is lined by the universal mucous membrane which faces all cavities of the body having an outlet. The susceptibility of mucous membranes to inflammation is enjoyed by the drum cavity in common with all other mucous sacs. The serous tissues of the closed sacs pass from the brain envelopes, through aqueducts, into the labyrinthine cavities of the inner ear. Thus we have dermic, mucous, and serous spaces, all represented in the auditory apparatus, and of these the mucous is by far the most prone to take on suppurative inflammation.

There are three conditions known as otorrhœa or aural discharge, which differ widely in pathological significance. The first is an acute form accompanied by severe pain, some external swelling, and a stuffed sensation in the ear, with loss of hearing. After a few days and nights of more or less suffering, matter oozes from the ear; the symptoms subside, hearing is restored, and the patient feels quite well. This condition is known as furuncles or circumscribed abscesses in the lining of the external meatus, simulating boils upon the skin, which disappear of their own accord having

run a rapid course. As an evidence of disturbed health, they are very prone to recur. Attention to the general condition of the system will correct this evil even should the ear be ignored, although hot soothing fomentations more especially when used as an adjunct to free scarification will rapidly expedite a cure.

A second condition is called *otitis externa*; a discharge from the dermic surface of the external ear, accompanied by much injection and swelling of the dermic lining. At first the discharge is watery, gradually becoming purulent. When the periosteum is involved, abscesses may form which may eventuate in necrosis of a portion of the bony wall, with fistulous openings, both within the meatus and behind the ear near the mastoid region. Although the continuance of these discharges depend much upon the general depression of the system and show a disposition to dry up as the body at large improves, the comfort of the patient is much enhanced by local cleansing and soothing applications.

When an aural discharge has been of long continuance, the diagnosis of *otitis media* may safely be made, and most frequently a history of acute aural catarrh of the drum cavity, usually called earache, can be traced. Its early condition was often an inflammatory extension of the throat, first causing injections and swelling of the lining membrane of the drum cavity, quite enough to close the eustachian opening and make of the drum a shut sac. The products of inflammation soon fill this small cavity. Then commences the severe suffering of internal distention and nerve pressure both upon the promontory and the drum head. Finally, rupture of the purulent collection, through the tympanic membrane by ulceration occurs, and the distressing symptoms which accompany the appearance of a discharge from the ear subside. In many cases of acute suppuration of the middle ear, rupture of the drum head brings the same relief as the bursting of the skin in the spontaneous discharge of a whitlow, and a rapid disappearance of the mucous congestion may permit the drum cavity to resume its normal conditions, including the closure of the opening in the drum head by firm and complete cicatrization. This consummation often obtained when the drum head is timely incised is by no means the rule, especially when the case has been allowed to run its own course, without the restraining advantage of judicious treatment. When such cases finally come under our observation we find a foetid

discharge of long continuance accompanied with very deficient hearing. An examination with the speculum in a good light will nearly always reveal the red exposed congested mucous lining of the drum cavity as seen through an opening more or less extensive in the drum head. This view can only be obtained after a thorough cleansing of the external meatus. Often the lining membrane of the eustachian tube, even to its opening in the drum cavity, has shrunk to such an extent as to allow air to pass through it freely, from the throat, and the forcible blowing of the nose may make the nose whistle; a simple and sure means of diagnosing a perforation of the drum head.

In all such cases, the muco-purulent discharge, however copious, is the pathological excretion from the mucous lining of the drum cavity. It must accumulate in the drum before it escapes through the abnormal opening more or less extensive in the drum head, and finally finds its exit at the concha. This thick secretion must take some time to traverse this passage of $1\frac{1}{2}$ inches in length, and often 24 hours is consumed before the secretion of one day makes its appearance at the outer orifice, as it has to be pushed forward by a later formation.

We all know that pus when first formed is a bland, innocuous, taintless fluid, organized like the blood with liquid and solid elements. The floating, fleshy particles, which we call pus cells, under the high temperature of the body, must, if retained, become as putrescent as would blood or flesh after a sufficiently lengthy exposure to a summer's heat. This decomposed fluid excoriates the surfaces which it overlies, and through a continuous irritation promotes the formation of more matter. The presence of the discharge keeps up the disease, or as we may more tersely put it, the running from the ear causes the running of the ear. Such are the cases to be found in the clientel of every active practitioner, who being wearied by their obstinate persistence seeks refuge in advising patients to put up with these diseases as a safe guard against more serious maladies.

In this connection I will make a very bold statement which any one can verify, viz: that cleanliness alone will cure many of these most obstinate cases of otorrhœa, and that really the question of most importance in the treatment of these disgusting affections, is how can we obtain this desirable cleanliness? Washing with warm

water will secure it if properly done ; and the mode of doing it when once known is found exceedingly simple. There is one point which admits of no question, viz : *that an offensive ear is a foul one, regardless of the number of times per day it is syringed.* Foetid pus always means pus some time secreted, and which has had many hours to metamorphose itself from its primitive bland state to one of offensive irritating liquid. If the ear always contains foetid pus it will continue to discharge whether its duration be months or years.

Successful surgery secures its greatest triumphs in close attention to little things, and the surgeon who wishes good results must see to it that all the detailed arrangements for carrying out his plans are understood. The aurist cures patients of chronic discharges which have so long baffled the family physician by a course of treatment identical in its wording with that previously used. Syringe your ear with warm water and use a prescription of astringent drops, are the instructions given by both family physician and aurist. The physician believes that he has done his full duty to his patient when he has advised the purchase of a syringe, and has written the prescription. The patient doing as directed, buys a glass syringe, because it is small, clear, and cheap, with which it is impossible to cleanse the ear. Let him throw in warm water as best he can, he leaves the drum cavity and the depressed portion of the meatus full of thick offensive pus, upon the top of which he instills a few drops of the astringent solution. Of course, there is no commingling of these thick and thin liquids. The astringent never comes into contact with the diseased surface and persistence in the application brings no good results. The aurist gives the same advice and writes the usual zinc and carbolic acid ear drops. But he goes further : He tells his patient to buy only the proper ear syringe that can be worked with one hand alone ; and of these the simple rubber bag is the best. He explains how the other hand must be used to straighten the passage, by drawing the ear upwards, backwards and outwards. Then he shows how the water is to be thrown by the syringe, downwards and inwards which will surely carry the stream into the very drum cavity and thoroughly cleanse it ; pass in a bit of cotton on the end of a match after a few syringe fulls of warm water have been in this way injected into the ear, and it will bring out with it no foul

odor and will appear free from all stain. After such a proper cleansing, let the drops be applied. Now they are brought into direct contact with the congested membrane, and will do the work designed.

The law then becomes imperative, *a clean ear must be the foundation for any treatment intended to arrest chronic discharge.*

As to the medication necessary, after the cleansing has been obtained, an ear drop consisting of sulph. zinc, grs. iij; carbolic acid, grs. iij. to \bar{z} i aqua is a prescription of general utility. When the discharge of very long standing does not yield to this application the zinc may be changed for any one of the mineral salts used for astringent purposes. In some cases nitrate of silver in solutions of varied strength, will accomplish what the milder astringents failed to do; and even with the caustic solutions, the heroic application of a liquid containing as much as 480 grains to the \bar{z} i. of water has in a few very rebellious cases proved effective.

Of late years desiccating powders have to a considerable extent taken the place of ear drops. When salicylic acid was brought forward as a purifier of great potency I experimented largely with it as a remedy for chronic aural discharges. I used it in powder, diluted one part to three, with oxyd of zinc or calcined magnesia. The powder was blown into the ear, after thorough cleansing of the aural passage, and with a success sufficiently marked to warrant publication of my experience.

In latter years I have substituted for this powder, alum, which I have found more efficacious than any remedy previously used. By means of it I have cured discharges of fifty years standing in one week, and I now find very few aural discharges, however chronic that withstand its proper application. The method employed in using it is first to thoroughly cleanse the ear, then wipe dry the passage by means of a loose cotton swab made at the end of a mate or special applicator; after which puff into the ear powdered alum *filling the drum cavity with it.* The very first application will often indicate a diminished discharge at the end of twenty-four hours. The ear is then washed out and the alum powder again applied. This treatment is renewed once a day until the discharge is so reduced that the powder blown into the ear continues dry upon its exposed external surface. If it has crusted in the ear, it may be left for days as a hard mass giving no pain and causing no annoy-

ance. If after a week or ten days interval, the ear has seemingly stopped discharging the alum powder remaining dry, although in a cake it may be syringed out, as if it were a foreign body. It usually leaves a healthy mucous membrane behind it.

Since powdered alum is so constantly and successfully used by me in aural discharges, I find it convenient to apply it through a puff bottle which expedites much the insufflation, and is far preferable to a quill or pipe stem. In damp weather, I was formerly annoyed by the caking and lumping of the alum in the bottle which necessitated frequent drying and repulverization. I now add to it, at the suggestion of my assistant, Dr. W. A. McDowell, a small quantity of lycopodium powder, which when thoroughly triturated with the alum, makes it more volatile and not at all disposed to lump: 10 grains of lycopodium to the drachm of alum is ample.

In my own practice I have ceased to consider chronic aural discharges an obstinate disease; for under the thorough cleansing and the insufflation with alum, I find they yield more kindly to treatment than any other affection that has been of long continuance. One advantage of no small merit in the alum treatment is, that it is incapable of abuse. An excessive application can do no harm.

TWO CASES OF RUPTURE OF THE SPLEEN IN WHICH NO EXTERNAL WOUND OR MARKS SAVE A SLIGHT BRUISE WAS VISIBLE ON THE BODY.

By E. A. ANDERSON, M. D., Wilmington, N. C.

Some ten years ago an affray took place between two negroes, caused by jealousy in which one was killed, leaving no external marks of violence on the body. Charles, a negro, returning at a late hour to his house, found Romeo in criminal intercourse with his wife, and pursued him, seizing as he ran, an axe then lying on an adjoining wood-pile. Finding it impossible to catch him, he threw the axe with all his strength at Romeo, who was rapidly running away. The axe describing a curve, struck the fugitive on the right side with the end, he tottered a few steps, groaned and sat down on

a log of wood for a few minutes, and then died. When the body was carefully examined, no bruise, laceration, or any external mark of violence was visible. A *post mortem* was held by myself, assisted by several other physicians. The brain was first carefully examined and found healthy—next, the thorax, in which all of the organs were sound. The abdomen was then opened, and the stomach, liver, kidneys, bladder and intestines were of a normal condition. The entire abdomen was filled with fluid and semi-fluid and coagulated blood. Upon sponging out and removing this, the cause of death was clearly visible. The spleen was torn half way into two, and from this gaping wound the entire blood of the whole system was poured out, causing instantaneous death.

Charles was tried for murder, but was acquitted on the ground of justifiable homicide—the jury very correctly holding that the provocation excused the deed. Without this *post mortem* it would have been impossible to have formed even a conjecture of the cause of death.

Case 2.—During the spring of 1865, I had charge of a large United States Army Hospital, known as the Sherman Hospital, in this city. This was soon after the fall of Fort Fisher, which virtually ended the war, as it was the last fortified place then held by the Confederate Government. Schofield's army, some 15,000 strong, then held the city, to supply which numerous corps required large deposits of provisions and commissary stores. One of these commissary depots, was watched by a single watchman who was attacked by three negroes, knocked down and stamped on the left side, and left senseless while they plundered the commissary stores. The military patrol going his rounds found this poor unfortunate white man lying on the ground, groaning and breathing heavily. This was about day-break or six o'clock in the morning. The watchman was carried in an ambulance to the hospital and I was summoned to visit him. He seemed in much pain, could not speak, was insensible, and groaned heavily and soon after expired. He had no pulse at the time I saw him, no wound on the surface of the body, that could point to the probable cause of death, but was pallid as if all the blood had left the surface. The nature of the injury was revealed at the subsequent examination of the negroes who killed him. By the order of the Provost Marshall, I made an accurate and rigid *post mortem* of the body, and drew up a procé-

verbal, a detailed description of the case to be used in the military court, which at that time alone was cognizant of such cases. In this, I was assisted by Dr. Savage, of the United States Army, who also signed the procès verbal with me. The brain was examined and found perfectly healthy; next, the contents of the thorax, including the heart and lungs which were both perfectly sound, and the liver, bladder, stomach, and intestines were perfectly normal. Upon removing the stomach, liver and intestinal canal an immense amount of coagulated and fluid blood was found in the abdominal cavity; and upon searching for the source of the hemorrhage, it was found in the spleen which was torn in two, or ruptured through half its body. A court martial was held on the case, and as is usual "*inter arma leges silunt.*"

The guilty culprits escaped justice and the great interest of this case was the sudden death from no external injury. Cause of death was revealed only by the *post mortem*.

TEMPERATURE OF THE BODY IN THE TROPICS.

Among the reports received by the Army Medical Department from army surgeons on service abroad is one giving an account of observations on the temperature of the body by Surgeon-Major J. Crosse Johnston, M. D., in medical charge, 43d regiment. He states that the normal temperature of the body in temperate climates is given in text-books as being about 98.4° in the axilla and that Dr. Beecher's observations, quoted by the late Dr. Parkes, indicate an increase under exposure to high temperatures in the proportion of 0.5 Fahrenheit for each degree of increase in the temperature of the atmosphere. Dr. Johnson at Bellary, in September, 1876, with the mean temperature 81.7 deg., made observations night and morning for seven consecutive days upon 16 men in fair health, and who had been not less than three years resident in India, and he found that the heat in the arm pit had a mean of only 97.63 deg. which is not only below what would result from the application of Dr. Beecher's formula, but actually less than the standard of temperate climates. Some doubt having arisen as to the accuracy of the thermometers employed, very careful supplementary observations were made, and Dr. Johnston states that 320 readings showed a mean of 97.74 deg., nearly corresponding with the result first obtained. It would seem, therefore, that the temperature of the body is rather less in inter-tropical than in temperate climates.—*London (Weekly) Times*, Feb. 1st.

LEUCODERMA.

Syn. *Leucopathia*.*Vitiligo*.*Achromia*.

By THOMAS F. WOOD, M. D., Wilmington, N. C.

Whether or not leucoderma is on the increase since the emancipation of the slaves there is no means to determine, at any rate. More attention has been called to it in the last few years, and more cases have been observed on our streets.

In the London *Medical Examiner* (July 19th, 1877) I reported a case which so far as I know is unique, and as it has not been published in this country I will reproduce it with such additional information as I have gained.

"A negro, J. C., æt. 40; very black, thick lips, strongly marked African features, had typhoid fever in 1866, from which he convalesced very slowly. His poor health continued until the early part of 1867; patches of leucoderma made their appearance symmetrically on his hands and arms, then on his face, and lastly on his body. The question as to previous syphilis was answered negatively. For several months in the years 1867 and 1868 his eyes were so intolerant of light, and his skin so sensitive to the hot sun, he had to give up his occupation—that of a sawyer.

"His face and hands by the end of 1873 had become almost as bright as those of the brightest mulatto; also the scalp in large patches as well as the hair. The nasal tract within sight was bare of pigment.

"He passed from my observation until the 20th of October, 1876, when he was again closely examined, and it was discovered that re-deposit of pigment was going on in the same order in which it was absorbed. He could read under a bright light, and was about his ordinary duties in the saw-mill, although his health was not vigorous. I regretted very much I was not able to get a photograph of this patient in the different stages of the disease, but I was unable by persuasion to get his consent. Steadily since the above date there has been a re-deposit of pigment going on, so that in some of the earlier spots the color is nearly that of the sound skin surrounding it."

Since that date I have had opportunities to examine this patient, and find that the re-deposit of pigment seems to be going on slowly, but that his strength is far from being what it was. This infirm condition I am not inclined to attribute to the disease, but if it continues I will expect to see the leucoderma increasing in area.

Another case reported to the same journal has been under careful observation since. She is a negro woman of about fifty-two years of age, who has enjoyed a fair degree of health up to the present date. Her family history, if any reliance can be placed in the account, is good. About thirty years ago she remembered seeing the first white patches commencing on her hands. The accompanying cut gives her appearance about two years ago, since

which time there is little of the original black to be seen except some fading patches around the nose and cheeks, giving her the appearance of a white woman with black stains upon the skin. This symmetry of absorption is most beautifully shown here. Her original color as seen in an ambrotype taken when she was young shows her skin to have been very black. The clear white skin now

can hardly be described, and so sensitive is it that by continued exposure to the summer sun it readily blisters.

This patient, has had no attack of sickness for ten years, but becoming more and more liable to stubborn attacks of epistaxis and myalgic pains in the lower extremities. This latter symptom is due to exposure, bare-footed. The epistaxis is not to be wondered at, for the entire nasal tract is bare of pigment, presenting much the appearance of having been denuded of its cuticle. The olfactory sense seems to be perfectly good, and does not confirm M. A. R. Wallace's statement in *Nature* (Sept. 7th, 1876), "that colored or dark pigment in the olfactory region was essential to perfect smell."

This case has been examined with special reference to acquired constitutional symptoms, but they have not been found,—confirming the statements made by the patient. There seems to have been no dermatitis at all, and the skin is as functionally active as in ordinary health. There is no photophobia as in the first case, and no alteration in the pigment of the eye.

Dermatitis produced artificially by a vesicant in the negro or mulatto has a varying after-effect: in some cases, particularly if mustard has been used, there is nearly always a staining of the skin: while the cicatrices resulting from scorbutic ulceration, syphilitic rupia, and small-pox, as we would be led to expect, are marked by white patches. It is less uniformly the case that small-pox cicatrices are lighter than the surrounding skin, and perhaps a careful collation of the cases would prove the contrary. In many of the lighter mulattoes the margin of the small-pox cicatrix is darker, while the centre is several shades lighter than the surrounding skin. It can hardly be inferred, therefore, that leucoderma results from dermatitis, as held by some dermatologists, and that dermatitis in some cases causes pigment deposit and sometimes pigment destruction or absorption, and therefore we must look elsewhere for a solution of the problem.

There is a wide-spread opinion that this disease bears some relation to leprosy, but this opinion is a popular one, and not held by physicians. I am convinced that many of the cases supposed to result from syphilis are not true leucoderma, but cicatrices resulting from destructive syphilitic ulceration of the skin as in rupia and ecthyma.

This disease has so little effect upon the general health that there is less interest attaching to its solution than would otherwise be the case, but following the indications held out in the symmetrical disappearance of pigment, we will, probably, in discovering the organs at fault, be able to determine which organ or set of organs preside over the important functions of pigmentation.

As Bright's disease was the starting point of much of our present knowledge of the physiology as well as of the pathology of the kidney, so the study of leucoderma may reveal to us functions of the skin not now appreciated, and put at rest the present doubtful relations which the supra-renal capsules bear to pigmentation.

A CASE OF URÆMIC CONVULSIONS AT END OF EIGHT MONTHS; NATURAL LABOR AND BIRTH OF A LIVING CHILD AT TERM; WITH SOME GENERAL REMARKS UPON THE TREATMENT OF PUERPERAL CONVULSIONS.

By JAMES PARRISH, M. D., Portsmouth, Va.,

As the occurrence of convulsions during the latter part of gestation is still frequently considered an indication for the induction of labor, the following case may not be without value.

At 11½ P. M., January 30th, 1878. I was called to see Mrs. H. E. J., age 23, a robust primipara advanced to about the end of the eighth month. She had been seized with convulsions an hour and a half before my arrival and had undergone in that period, according to the report of an intelligent nurse, five severe convulsions. The patient was found in a profound stupor, with stertorous breathing, respirating rate twenty-four, pulse 96, skin hot and dry. There was general dropsy of an extreme degree, the face and upper limbs being greatly swollen, as well as the lower extremities. The convulsions had been preceded for several hours by those two symptoms so characteristic of acute uræmia, agonizing frontal headache and obstinate nausea and vomiting.

A vaginal examination revealed a tightly closed os and a long

and conical cervix; the head could be plainly made out through the anterior uterine wall, but there was no indication of any attempt at uterine action. Some three ounces of dark urine were withdrawn by catheter, and thrown away by a stupid servant before I had an opportunity to test it. Prior to the examination the patient was placed under the complete influence of chloroform in order to diminish the danger of exciting another convulsion; but the examination concluded and the bladder evacuated, there was no further resort to the use of this agent.

At 12 midnight, morphia gr. $\frac{1}{4}$ was administered hypodermically.

1 A. M. Convulsion; morphia gr. $\frac{1}{4}$ hypodermically. Then followed a lull of four hours the patient sleeping quietly, the respiration maintaining its former high rate.

4:50 A. M. Convulsion; morphia, gr. $\frac{1}{4}$ hypodermically.

6 A. M. Convulsion; morphia, gr. $\frac{1}{4}$ hypodermically.

7:20 A. M. Convulsion; morphia, gr. $\frac{1}{4}$ hypodermically, and an enema of $\frac{5}{8}$ ss chloral hydrate. Soon after this last injection the hitherto dry and hard skin broke into a warm perspiration. There were no more convulsions; in the afternoon the patient began to recover consciousness, and was able to take milk in fair quantities and at suitable intervals.

It will be seen that one and two-thirds grains of morphia were administered hypodermically, to a patient perfectly free from the opium habit, in a little over seven hours, yet the high respiration rate was maintained throughout. I admit that my faith in the plan of treatment began to fail with the repeated recurrence of the convulsions in spite of the repeated injections of morphia, and I almost determined after the fifth injection to give morphia no more,—hence the enema of chloral. What share this last agent had in the result is, of course, past finding out. As for myself, having seen chloral utterly fail in a former case of uræmic convulsions coming on before labor, I doubt that it was even a “last hair.”

On the next day, and on every day during the following fortnight, there was an evening return of the frontal headache and nausea. Both symptoms promptly yielded to the administration, by the mouth, of a morphia gr. $\frac{1}{4}$ and chloral gr. xv draught, though on some evenings it was necessary to repeat the dose once or more. The marked periodicity of these attacks, of course, suggested

the use of quinine, but although it was pushed nothing came of it except cinchonism.

Under rest in bed a rigid milk diet and the use of morphia and chloral as above noted, there was a gradual increase in the flow of urine and sometimes diminution of the dropsy, though the patient remained markedly anasarcaous until after delivery. No effort was made to treat the uræmia by more direct means, except an attempted diversion with the compound jalap powder, 3i in the morning. This was so plainly detrimental that it was speedily abandoned.

Finally, on the 24th of February labor came on and a healthy female child was born in about twelve hours without other assistance than the use of chloroform during the second stage. After delivery the dropsy and albuminuria rapidly disappeared, convalescence was uninterrupted and rapid, and at the present writing mother and child are "both doing well."

The outcome of my not very extensive experience in puerperal convulsions is a decided suspicion that they do not furnish sufficient reason for interrupting the course of gestation ; and that those which come on during labor should not, as a rule, cause any marked change in the management of the labor. In these last cases I only interfere, quoad the labor, for reasons furnished by the labor itself. In my opinion a very important part of the treatment of puerperal convulsions is the avoidance of the shock and nervous perturbation that attend forced delivery in a greater or less degree, especially when it involves forcible dilatation of the cervix, or rapid evacuation of the womb as in turning ; to the use of the forceps, when the os is dilated and the head fails to make satisfactory progress, there is far less objection. In truth, convulsions are merely a functional nervous disturbance, a displacement of nervous energy, so to speak, and the treatment should be directed to the convulsions, not to the pregnancy or labor.

Post partum convulsions are almost always caused by shock and exhaustion ; in my own observation they have had a suggestive association with twin or other exceptionally severe labors, with one striking exception. In this, they followed a remarkably swift and easy labor in a primipara of fine physique. It seemed that the accumulation of potential nervous energy which takes place in antie-

ipation of the demands of labor was not nominally expended, and discharge took the abnormal and dangerous path of convulsion. I have found morphia the remedy for *post-partum* convulsion of whatever kind.

It is quite certain that many cases of puerperal convulsions are not really uræmic. In the hyper-charged state of the motor centres of the cord that obtains in the latter part of gestation, convulsions may be determined by an infinite variety of causes; a fit of indigestion, gall stone colic, in fact, any kind of sensory or physical perturbation. It is to be remembered that convulsions soon determine albuminuria; and possibly the presence in the urine of some forms of casts,—independent of any preëxistent kidney affection. Only those cases should be called uræmic that are attended by those symptoms which we know accompany convulsions from acute kidney diseases in the non-pregnant state;—scanty and usually bloody, as well as albuminous, urine, and *general* dropsy of the subcutaneous connective tissue. Uræmic convulsions too are usually preceded by obstinate nausea and vomiting and a frontal headache so intense as to overwhelm the self control of the patient.

The profession is mainly indebted to Dr. A. E. Loomis, of New York, for a just appreciation of the great value of morphia in the treatment of uræmic convulsions and coma. The extent of my belief in his method may be inferred from the case related; I have had the opportunity to verify the soundness of his plan not only in the pregnant and puerperal states, but also in the causally less complex convulsions of scarlatinal nephritis.

To control some cases of uræmic convulsions may require a rather heroic use of morphia, and it goes without saying that in emergencies of this kind one practitioner may abandon the plan of treatment sooner than another, with a possible result, in a given case, of failure for the first, success for the second. It is certainly feasible to kill even the subjects of grave uræmia with morphia, yet, whilst the respiration rate is at or near—and a fortiori above—normal, the continued use of morphia is almost safe. In estimating the effect of a method of treatment that is being employed in a case, the prior duration of the disorder is a very important factor. As in other neuroses, the tendency to recurrence increases with every repetition of the disordered act, so that a case that has had

five or six convulsions before coming under treatment, is very apt to have several after, in spite of the highest of high art. So when convulsions are threatened, and the prodromata in uræmic cases are frequently very characteristic, their development may be prevented by doses of remedial agents totally inadequate after their establishment; witness the repeated threatenings of convulsions in the case related, and their prompt suppression by doses out of all proportion less than those required in the seizure.

In non-uræmic convulsions, dynamic, as Barnes calls them, I fear that morphia is of less value, except in *post-partum* cases. Even purely dynamic convulsions before and after delivery are not exactly the same thing; in the former there is the irritability of surcharge of the motor centres, in the latter, almost always, the irritability of exhaustion.

Some years ago, in a case of dynamic convulsions coming on before labor, I saw morphia so reduce the respiration rate as to forbid its further employment, yet the convulsions persisted and went on to death; whilst of the brilliant success of morphia in *post-partum* convulsions of the same class—dynamic, I can recall several examples. (Perhaps I ought to state that not all the cases referred to in this paper have been under my own care. I have availed myself of others, under the charge of professional friends, with the history of which I have been made acquainted.)

It is in dynamic convulsions before and during labor that chloral finds its best opportunity. I prefer to give it by the rectum or hypodermically. It may not be generally known that the subcutaneous areolar tissue is exceedingly tolerant of even very concentrated solutions of chloral. It is in this class too, that chloroform comes in to best advantage, but to be effective it must be given so as to completely and continuously still the patient. A convulsion will come on long before complete emergence from the chloroform narcosis if its use be interrupted, the faintest movement is an indication for more chloroform. But given in this way for several hours during labor, it is attended by a grave danger, that of *post-partum* hemorrhage, a danger in almost direct proportion to the thoroughness and direction of its employment. Its action is also less sustained and continuous than that of chloral, and, as a rule, I prefer to restrict its use to the purpose of obtaining time for the absorption of chloral.

Regarding the older methods of treatment, my experience, I hope, is exceptional. The cases that I have seen freely bled and purged and violently delivered, I have also seen die.

It is hardly possible to lay down any hard and fast lines for the management of a condition so complex and variable as that obtaining in puerperal convulsions ; yet, as an attempt at the indication of the largest probability in any given case, I submit the following summary :

(1) Convulsions do not furnish any new indications in the management of the pregnant and parturient states other than the direct treatment of the convulsions.

(2) In all really uræmic convulsions morphia is the best remedy.

(3) In all *post-partum* convulsions morphia is the best remedy.

(4) In non-uræmic convulsions before and during labor chloral is probably superior to morphia.

(5) In obstinate cases of any class the joint use of the two drugs may give better results than either alone.

SELECTED PAPERS.

SPONDYLITIS RESULTING IN CARIES OF THE SPINE.

A Clinical Lecture delivered at the Bellevue Hospital, N. Y.

By LEWIS A. SAYRE, M. D.,

Professor of Orthopedic Surgery and Clinical Surgery in the Bellevue Hospital Medical College.

Gentlemen :—To-day we have some cases of spondylitis resulting in caries of the spine, called also Pott's disease, because it was first accurately described by Percival Pott, who died in 1788. But it is no more proper to call the disease which we are to consider to-day Pott's disease than to group the various affections of the kidneys, differing in causation, treatment, and prognosis, under the comprehensive title of *Bright's Disease of the Kidneys* ; for, though Pott and Bright were the first to write systematically upon the diseases which their respective names bear, yet neither of them pos-

essed anything like the amount of definite knowledge in regard to their etiology, pathology, course, treatment, and termination, which is known at the present time. Although we would give Bright all the glory which is due to him as the first systematic upon diseases of the kidneys, yet we do not think this should entitle a number of diseases, the existence and nature of which he was entirely ignorant, to bear his name. So, too, with Pott's disease, which we would prefer to call spondylitis—and which, unless arrested, results in caries of the spine. It ought to go by the name of Pott's disease no longer. The title, spondylitis, describes to some extent the nature of the disease in question, and hence is preferable to a title which gives no idea of the structures involved or the pathological changes which takes place.

Spondylitis may occur at any period of life, as the result of falls, wrenches, strains, or other traumatism, to the spinal column, or its attachments.

A blow or concussion may cause an extravasation remaining undetected until continued muscular exertion develops an inflammation which goes on to softening and disintegration. Suppuration may take place, and the imprisoned pus give rise to a great deal of pain ; but the most important point is, that the nutrition of the interarticular cartilages becomes interfered with, and disintegration, disorganization, or necrosis takes place on account of the very low degree of vitality of the involved parts.

Another way in which the disease may be produced is by the individual receiving a fall or a blow of such a nature as to cause the fracture of some one of the vertebral processes. As you know, a vertebra, in its early organization, consists of seven distinct points of ossification, each of which increases in growth until further along in life, when they become consolidated into a single bony mass. Now, some little blow to the part may be sufficient to set up an inflammatory action in some one of these ossific centres, or interfere with their nutrition, and thus lead to complete disintegration of the bony structures.

Another way in which the disease may be produced, is by the bending of the spinal column out of its normal position by the strong muscles attached to the bodies and processes of the vertebræ, as in the case of a wrench, where the powerful contraction of these muscles might pull up the periosteum and thus give rise to a periosteal inflammation.

Another way is by the compression of the ribs, thus driving the heads of the ribs against the articular facets so forcibly as to set up an inflammation which may result in carious degeneration.

But no matter what may be the cause of spondylitis, the symptoms which are characteristic of the disease are generally slow in their development, and sometimes require months before they speak out with sufficient distinctness to be recognized as peculiar to the disease under consideration. One of the earliest symptoms of the disease is due to the fact that the nerves given off from the spinal cord at points in close proximity to those implicated in the degenerative changes in the vertebræ become involved to a greater or less extent, the evidences of which are manifest at their *distal* extremities. For example, if the disease be in the neck, before there is any evidence of distortion, the patient will have a choking cough, difficulty in swallowing, thoracic pains, etc., which may lead one to think there is some disease of the larynx, trachea or lungs.

A patient was presented to you a few weeks ago, if you remember, suffering from paralysis of the lower extremities, caused by spondylitis in the cervical vertebra, but who had been for several months treated as a case of croupous laryngitis, and finally the physicians in charge decided to perform tracheotomy, for the purpose of removing a foreign body, supposed to be in the larynx. But prior to the intended operation I was called in consultation, and by simply lifting the child's head so as to remove the super-imposed weight from the diseased vertebræ, respiration became normal. By the adjustment of an apparatus to retain the head in this position (see figure 1, from photograph by Mason), the child was made perfectly comfortable, as you remember, and I have since received the following favorable report from her parents, dated Hot Springs, Arkansas, November 14th, 1877 :—

"Her health is greatly improved, and she romps about the premises all day long, as merry as a cricket. No nervous irritation, *no cough* nor lassitude, but a sunny, rollicking tom-boy."

And you all remember that, previous to the adjustment of the support, she was paralyzed in her lower extremities, and her peculiar cough was incessant.

Further down the spine the disease gives rise to palpitations of the heart, pain in the lower part of the chest, and a sensation of constriction.

The disease occurring still further down the column, the patient may have symptoms of gastritis, and receive at the hands of a physician, who fails to detect the true nature of the disease, a course of treatment for dyspepsia.

Occurring further down, the intestines may become involved, and all the symptoms of worm develop, the case being treated accordingly, no suspicion arising that a portion of the spinal column is diseased, until an abnormal prominence of it occurs at some point.

Lower still, the disease may give rise to pain in the bladder, rectum, and thighs, yet no suspicion arises as to the true nature of the disease until deformity occurs. A frequent desire to urinate is a common symptom of the disease in this portion of the vertebræ long before deformity is manifest.

So, when you find the symptoms we have enumerated present in any particular case, examine your patient carefully, and if you find no evidences of disease in the larynx, lungs, heart, liver, or digestive organs, then look to the back. Watch the child as he walks, and see if he moves with that freedom and elasticity so characteristic of childhood. If spondylitis be developing, the child walks in a careful manner, the muscles of the trunk are kept rigid to prevent any movement of the vertebræ upon each other, the joints of the lower extremities are in a state of partial flexion, to prevent any jar upon the vertebral column, the shoulders elevated, the chin pro-

jected, and every possible means taken to relieve the inflamed parts from pressure or movement. If the child be asked to pick up an article from the floor, he will simultaneously bend his hips, knees, and ankles, and thus by *squatting* reach the article, instead of *bending* over as a well child would do, his object being to prevent any movement of the spinal vertebræ. You then ask the child to raise himself upon his toes and come suddenly down upon his heels, watching to see whether he keeps his limbs straight or bends them to relieve concussion. The instant you see such actions as these, take off the clothes and examine the back. For this purpose, after the clothes have been removed, lay the child across your lap, face down, legs on one side of your thigh, and arms over the other thigh; gradually separate your limbs, in order to extend the spinal column and remove pressure from the inflamed parts.

I neglected to state that in this disease the peculiar respiration is a prominent and important symptom; it is short and grunting in character. When the child is placed over your thighs, and the spine extended, he will take a deep, full, and comfortable inspiration; it is the sigh of relief, as I call it. Should you approximate your thighs, and thus admit of pressure upon the nerves and inflamed parts, the child will have a spasm, and resume the same short, grunting respiration. If spasm does not follow upon the removal of the extending force, it, together with pain, may be produced by placing one hand upon the child's head and the other over the sacrum, and crowding the spinal column together.

You may press upon the spinous processes and get no pain, especially is this the case if the anterior portions of the bodies of the vertebræ be the seat of the degenerative changes; for pressure upon the spinous processes will tend to remove pressure from the diseased parts by separating the anterior portions of the bodies of the vertebræ and thus relief, instead of pain is given. You may examine the spinal column in this way and find no evidence of pain, and you say there is no disease. Do not be too sure of this, for it frequently happens that the disease does not begin on the anterior portion of the bodies of the vertebræ, but upon the sides of the vertebræ at their junction with the ribs: therefore, in order to ascertain whether this be the case or not, take each rib separately and crowd it against the vertebræ with which it articulates. By taking the ribs separ-

ately and driving them against their articulating surfaces, if disease exist at this point, you will elicit pain together with reflex spasm, and at the same time ascertain the exact situation of the diseased parts.

Treatment.—The treatment has been to place these patients in bed and confine them in the horizontal posture. This is beneficial treatment, in so far as it removes pressure from the inflamed parts, thus decreasing the tendency to softening, degeneration, and absorption; but it does not prevent reflex muscular contraction, unless there is combined with it extension and counter-extension; hence patients who recover from the disease without the use of extension recover with more or less distortion due to muscular contraction, even when they have been treated by keeping them constantly in the horizontal position.

But the confinement in the horizontal position for so many months, is injurious to the health of the patient, and hence numerous braces have been devised, the most popular of which is the one contrived by Dr. Taylor, of this city, and which you see adjusted to the little girl before you. This brace consists of an iron pelvis-belt, which is connected with two iron bars that make pressure along either side of the spinous processes, but do not press upon the processes themselves. The most important feature of the instrument is the hinge-joint movement on a level with the diseased vertebræ, thus permitting the super-imposed weight, sustained by the upper portion of the spinal column, to be transferred from the anterior portion of the bodies of the vertebræ to the posterior portion and the transverse processes.

Case 1.—This little girl when six years old received a fall, soon after which she began to have pain in the back, and was immediately sent to an institution for treatment. A brace was placed upon her, there being no distortion at the time, as her mother says, and she has worn it constantly ever since, a period of nearly four years, until now she is in the condition in which you see her. You will observe that the bands which pass around the thorax compress the chest in such a manner that the difficulty of breathing is greater than in any plaster-of-Paris jacket when properly applied.

When we apply a plaster-of-Paris jacket, we first expand the jacket to its fullest capacity by suspending the patients from the head any arm-pits; and then require them to take a full inspiration;

thus by the action of the levatores costarum and the intercostales, the ribs are separated to the fullest possible extent.

The little girl before you, as you see, is bent well backward and held in that position by the brace which she wears, the object being to allow the super-imposed weight to fall upon the transverse processes and the posterior part of the bodies of the vertebræ, instead of where it normally does. In this case it is the sixth, seventh, eighth, and ninth dorsal vertebræ which are diseased, and form the prominence. I wish you to observe the excoriation upon each side of this prominence ! The pressure of the instrument upon the sides of the projecting vertebræ has interfered with the nutrition of the parts, and that is one great reason why recovery does not take place. I have used this sort of a brace for many years, and it has been my experience that, if the patients recover while wearing it, they recover with more or less distortion. In order to remove pressure from the sloughing sores, I take thick pieces of felt and place them upon either side, as you see, and thus guard against cutting off any nutrition to the diseased parts from undue pressure. I have a skin-fitting knit shirt placed over the patient before the plaster bandage is applied. This shirt is without sleeves, and is secured in position by tabs tied over the shoulder. Beneath the shirt in front, in the epigastric region, we place a stomach or dinner-pad, which is removed when the plaster gets partially dry, and thus room is left beneath the plaster jacket for the ingestion of a hearty meal of victuals.

This child has never been swung up before, so we will have to instruct her as to the various steps of the process. As she raises herself by means of the pulley-rope, you see we do not permit her to bend the elbow, and pull down, but simply place one hand above the other, and continue this climbing process till she has raised the weight of her body from the floor, and simply touches the latter with the tips of her toes. This gives rise to no pain whatever, and the deformity which has resulted from the disease gradually becomes less conspicuous, as you see, due to the removal of the super-imposed weight from above, and the force of gravity acting upon the dependent portion of the body below.

We will now apply the bandages, which have been prepared of cross-barred muslin or crinoline torn in strips from two or three inches wide, according to the size of the patient, and about three

yards long, the meshes of which have been rubbed full of finely ground plaster-of-Paris and rolled up in the form of an ordinary roller-bandage. These are to be dipped, just previous to being used, into a basin of warm water, sufficiently deep to completely immerse the rollers when set into it upon their ends. If the bandage be put in on its side, the air cannot escape, and the inner portion of the roller will not be sufficiently saturated with water to make it easy of application. When the air has ceased to escape from a roller it is then perfectly saturated and fit for use, and should be applied at once. As you take one roller from the basin, squeeze it gently to expel the surplus water, and immerse another end-wise, which will be sufficiently saturated for application by the time you have applied the first. Never place two rollers in the water at the same time.

The thickness of the jacket to be applied depends upon the size of the patient, three to five layers being sufficient for an ordinary sized child, but for an adult of large size probably more thicknesses would be required.

Now you see the chest is fully expanded, and, as my assistant applies the plaster bandage, I press the layers together and see that it fits the body snugly at all points, pressing it into the intercostal spaces and all other sinuosities, being careful not to make undue pressure over any elevations or projecting points. You perceive that our little patient holds herself in position by means of the pulley-rope with perfect ease, and she has just told me that she is entirely free from pain. Having covered the trunk with two layers of the plaster bandage, we now place narrow strips of tin, roughened on either side like a nutmeg grater, vertically around the trunk three or four inches apart, and carry another wet plaster bandage over these, which materially increases the strength of the casing without adding to its weight.

Having completed the application of the bandage, we now hasten the setting of the plaster by running up and down it with this heated iron roller. This idea was suggested to me by an Irish lady when I was in Ireland, where the atmosphere was so moist as to materially interfere with the setting of the plaster ; but the ordinary triangular iron found in houses proved to be so inconvenient that I had Mr. Reynders make this form of an instrument, which

looks very much like a miniature garden roller. When the iron roller gets cool, it can easily be changed for a hot one.*



We will now lay her upon the table until she gets dry; but before the drying process is completed, it is important to remove the dinner-pad, and, having withdrawn it, to press the bandage in the inguinal region, thus widening it out over the anterior and superior processes of the ilium. Should the spinous processes project too prominently, it is a wise plan to place a pad over them before beginning the application of the bandage. The pads should project below the casing, so that they can be easily removed when the plaster has set. We will cut out a piece of this little girl's jacket directly over the excoriation on her back, and through the opening thus made apply some unguents; probably the next time she has a jacket adjusted to her, this will be unnecessary.

Should there be any pain experienced after the application of the jacket, no matter how slight, it is due to the fact that the bandage has been improperly applied; therefore it should be *removed at once* and a new one applied, for there is something wrong. If this be neglected there is great danger of excoriation as a consequence of undue pressure upon certain parts.

Sometimes very young children will cry when suspended for the purpose of applying the plaster jacket, but the cry of pain can be easily differentiated from that of fear or obstinacy. When their crying is not due to pain, you can proceed with your work with no fear of making undue compression of the thorax, and thus interfere with the pulmonary circulation.

Case 2.—This patient has suffered from spondylitis for six or seven years, and, as you see, has an enormous curve. I cannot say whether we will be able to help this patient or not, until we have suspended him in order to see whether the curve of his back is lessened; if so, we may be able to do him some good.

By applying a strip of sheet-lead closely over the curved portion

*I have since discovered that the plaster hardens more readily by blowing on it with a pair of bellows.

of the spine, before he is suspended, removing this, placing it edge-wise upon paper, and tracing its outline with a lead-pencil, we get an exact representation of the spinal curvature. Now, suspend your patient, straighten your strip of lead, and apply as before; remove, trace its outline alongside the first, and you have a mathematically accurate representation of the decrease, if there be any, in the spinal curvature. These patients who recover from this disease could, with timely and proper treatment, just as well recover without distortion as with it. Should a patient come to you with partial or complete consolidation, you will under no circumstances be justified in attempts to completely rectify the deformity. The vertebræ in this case are very nearly ankylosed, for you see the child is able to stand without support while I am putting on his shirt; frequently the pain is so great that the patient is unable to stand, and we are obliged to put his shirt on while he is in the horizontal position.

We have now ascertained the degree of curvature, both before and after suspension, and you observe what a marked diminution in the curve has taken place. Now, if we succeed in retaining this patient's spine in a position with no more curvature than it has while he is suspended, recovery will take place with very much less deformity than he now has, and it will take place much more rapidly. We will apply the plaster bandage in the same manner as in the previous case.

After an individual, suffering from spondylitis, has been placed in a properly applied plaster-of-Paris jacket, almost the first change in the appearance of the patient, which you will notice, will be the flush of color to the cheeks and an expression of absolute comfort.

In cases of spondylitis, abscesses are sometimes connected with the diseased vertebræ: and, if so, they may open down upon the thigh, in the rectum, and there is no telling where they may open, even when the disease is high up in the dorsal region or in the cervical region. Should an abscess open in any place where it will be covered by the plaster bandage when it is applied, you should make an opening through the casing so that any desired applications can be made. For this purpose place a piece of oiled silk over the abscess after a free incision has been made, then draw on the shirt,

and, having placed a piece of folded card-board with a pin projecting through it, over the wound, so as to indicate the position of the abscess, apply the plaster bandage, passing it over the pin, which, projecting, will serve as a land-mark for cutting a fenestra. Now make a circular incision which shall extend through all the layers of the jacket, remove this piece, and when you come down upon the shirt and silk, *star* them and turn the flaps over the cut edges of the opening through the casing, which will leave a clean fenestra leading to the abscess. Put in some Peruvian balsam and oakum or carbolized oil, place a bandage over it and dress it every day. This arrangement is all that could be wished, and does not perceptibly weaken the support, which is so essential in the treatment of these cases. When there are any active inflammatory changes going on within the vertebræ, you will find it much better to retain the casing entire without dividing it. Sometimes, however, after the inflammatory processes have been arrested, and the patient is convalescent, the jacket may be divided in front and islet-hooks placed upon each side, a corset string then being used to retain it in position. Thus modified, a plaster jacket may be removed or applied at pleasure, and it makes a much better corset for support than the ordinary kind.

Case 3.—The case which I now present to you is one in whom the disease is in the cervical vertebræ. The same principle of treatment is applicable here as in other portions of the spinal column: but the plaster jacket in this instance acts as a support to a jury-mast or head-rest, from which the head is to be suspended. This child, you observe, has his chin resting upon his sternum, his hands upon his knees, and has that grunting respiration so peculiar to this disease. By simply placing one hand under the chin and the other under the occiput, and gently lifting the head, you observe that the jerking respiration ceases at once. We therefore allow the child to suspend himself by the head-rest, having previously put on this skin-fitting shirt and adjusted the dinner-pad, we apply the plaster bandage as in the first instance. Having now covered his entire trunk with two layers of the bandages, we now adjust the jury-mast or head-rest. This, as you see, consists of two parallel, malleable iron bars which go upon either side of the spine, being connected at the top and giving support to a piece which is curved

over the head and terminates in a swivel or cross-bar, from which is suspended the leather head-rest supporting the chin and occiput. The two malleable irons upon either side of the spine are capable of being bent to accommodate any curve. Thin strips of tin, one-half to one-fourth of an inch in width, and perforated with holes, are attached to the bars, which pass two-thirds of the way around the body. Another layer of plaster bandage is applied over the tin strips and lower portion of the jury-mast, which serves to secure them in position. The upright bar behind has two slots in it, so that it can be moved up and down and secured in any desired position. The result is that the child carries the weight of his head, through the medium of the jury-mast and plaster-jacket, upon his hips.

Having completed the application of the bandage, we will now lay the child upon the bed and wait for the plaster to set, after which we will suspend his head from the cross-bars by means of the leather head-rest, taking care to have it sufficiently elevated to give freedom from pain. Having done this, the child will be able to walk about with his head in the ordinary position, free from pain and with an expression of comfort, as seen in Fig. 1.

[The lecture being completed, the first case was measured against the wall, and found to be three-fourths of an inch taller than before the plaster bandage was applied; cheeks more red in color, and the child perfectly comfortable.

The second case was not so much increased in length, but much improved in position. He stated he was much more comfortable than with any brace he had ever worn.

The third in whom this disease was in the cervical region, after the head swing was applied and properly adjusted, ran about the room with perfect freedom, head erect, sustained and supported by the jacket and jury-mast alone, requiring no support from his hands whatever.—*Medical News and Library*.

DR. WAGNER'S LETTER.

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We add the particulars of the case referred to on page 292 :

The child of Mr. Rugg, of Hot Springs, Arkansas, was sent to me by Dr. Hammond for examination and opinion, on September 28th, 1878.

The author stated that several months ago, whilst taking its evening meal, the child was suddenly seized with a violent paroxysm of cough and difficult breathing, which continued during the night. the impression was then that a particle of food had gone the "wrong way."

When brought to me, the most prominent symptoms, were a peculiar laryngeal breathing, at times stridulous, and cough of a dry, short, hacking character. With great difficulty I succeeded in obtaining a hasty view of the larynx with the mirror; there was neither paralysis of the chord nor growth to produce the peculiar breathing, the hyperæmia of the mucous membrane I regarded as a result and not the cause of the cough.

I did not examine the spine as the father informed me that Dr. Hammond had pronounced it "all right." Dr. H. afterwards informed me that such was not the case, but that the history of a foreign body in the windpipe had been so clearly given by the parents that that he had at once referred the case to me, as more properly coming within my province. Upon the receipt of my letter containing my opinion he examined carefully the spine, discovered Pott's disease, and then referred the case to Dr. Sayre.

After my examination of the child's larynx I became satisfied that the cough and difficult breathing were produced by reflex action, and in my letter to Dr. Hammond, I stated that if the cause was not spinal irritation, tracheotomy as a dernier resort in my opinion would be justifiable, the parents giving a clear and connected history of a small foreign body having possibly entered the trachea.

[Signed]

CHARLES WAGNER, M. D.

Physician to Metropolitan Throat Hospital.

53 West Thirty-Fifth Street.

THE ANTIQUITY OF THE METHOD.

1905 CHESTNUT ST., PHILADELPHIA, April 21, 1878.

DR. SAYRE :—My Dear Doctor :—When your son was here two

or three weeks ago I told him that Dr. Ashhurst had found a reference to suspension of the body in spinal disease, and I promised to send it to you as soon as I should be able to find it.

The book is entitled "A Treatise on Rickets, being a disease common to children, wherein (among many other things) is shown (1) the Essence; (2) the Cause; (3) the Signs; (4) the Remedies of the Disease." By Francis Glisson, George Bate, and Ahasuerus Rege-marter, Fellows of the College of Physicians, London. Printed by John Streater in 1868. I enclose a copy of the extract, as I don't think you will be able to find the book in New York. * * *

Believe me, very sincerely yours,

C. F. HUNTER.

Extract from Glisson on Rickets, p. 363.

The artificial suspension of the body is performed by the help of an instrument cunningly made with swathing bands, first crossing the breast and coming under the arm-pits, then about the head and under the chin, and then receiving the hands by two handles, so that it is a pleasure to see the child hanging pendulous in the air, and moved to and fro by the spectators. This kind of exercise is thought to be many ways conducive in this aspect, for it helpeth to restore the crooked bones, to erect the bended joints, and to lengthen the short stature of the body. Moreover it exciteth the vital heat, and withall allureth a plentiful distribution of the nourishment of the external and first affected part; and in the meantime it is rather a pleasure than a trouble to the child.

Some, that the parts may the more be stretched, having leaden shoes upon the feet, and fasten weights to the body, that the parts may the more readily be extended to an equal length. But this exercise is only proper for those that are strong."

This work on Rickets belongs to the Pennsylvania Hospital Library.

C. F. H.

Heart Beats in a Life-Time.—Dr. Guyst has taken the trouble to estimate the number of heart-beats in a life-time. He finds that in a life-time of fifty years there are 1,928,160,000; during a life-time of sixty years, 2,269,800,000; and during a life-time of eighty years, 3,007,040,000.

CORRESPONDENCE.

OUR NEW YORK LETTER.

15, WEST TWENTY-SIXTH STREET,

NEW YORK, April 26th, 1878.

Dr. Gouley on the Supra-Condylloid Amputation of the Thigh—Dr. Thomas on Intravenous Injection of Milk—Dr. Sayre on the Treatment of Pott's Disease—Appointment of Dr. Bozeman to the Woman's Hospital—Dr. Otis' New Work on Stricture. &c—Dr. Alan P. Smith—Lithotomy Record—Case of Two Bladders, one Containing a Stone—Physiological action of Extract of Duboisia Myoporoides—Dr. DeRosset on the Mechanism of Accommodation.

At the stated meeting of the Academy of Medicine, April 18th, Dr. Gouley read a carefully wrought paper on the supra-condylloid amputation of the thigh.

The names associated with this operation are Gritti and Risorì, of Italy, Stokes, of Dublin, Bardleben, of Germany, and Gouley and Weir, of this city.

The conception to Gritti who performed it over twenty-five years ago, followed for the first time in America, by Gouley, in 1862, with an unsuccessful result, however. The idea was derived from a study of the well-known osteo-plastic operation of Pirogoff at the ankle joint in which the calcaneum is resected and turned up to unite with the end of the tibia. It is intended to replace amputation at the lower third of the thigh, but is not held to be so favorable as that at the knee-joint when the patella is retained; but in these cases in which malignant disease or injury extends to the condyles, or in which the soft parts are so involved as to furnish insufficient flaps for an amputation at the knee, this new operation is to be preferred to one higher up.

The steps of the operation are simple:—an anterior semi-lunar or rochelar flap is made with the incision extending laterally on each side as high as an imaginary line drawn across the upper border of the patella, and extending as low down as the tibial spine. The ligamentum patellæ is cut through and along with the patella is dissected up with this flap. A somewhat shorter posterior flap is made. a thin section of the articular facet of the patella, removed with a

fine saw, and *afterwards* the femur sawed across about *three-fourths of an inch* above the lower end of the bone. The object in sawing the patella first is to secure a steady point d'appui from the limb before its removal. After the proper steps with reference to cleansing, hemorrhage, &c., the patella is brought backwards, its sawed surface applied to the sawed surface of the femur, and a single wire suture passed through the posterior border of both bones, to secure coaptation and to prevent displacement by traction of the quadriceps femoris. Suturing of the flaps and application of adhesive strips complete the procedure, which, it is needless to say, should be conducted throughout with a view to perfect asepsis.

The stump which results from this operation is an excellent one; it bears without pain or irritation the weight of the body, and renders unnecessary that any artificial limb should have its points of support at the pelvis. Moreover the preservation of the attachment of the quadriceps femoris greatly facilitates locomotion.

Careful investigations have demonstrated that at *three-fourths of an inch* above the articular surface of the condyles is the most suitable point for sawing across the bone. Above that there is great probability of opening the medullary canal and the danger of osteomyelitis and other unfavorable results which this often entails: and below that point the area of the sawed surface of the femur is too large to be covered by the patella, and a complete coaptation of the two surfaces is essential to speedy union, as well as to the avoidance of necrosis and purulent resorption. I think I have stated all that is necessary to encourage surgeons to the performance of this supra-condyloid operation, and related as far as is required the various steps of the procedure; but for other points of interest which Dr. Gouley's paper possesses, your readers must await its publication, which, I presume, will not be long delayed.

At the same meeting of the Academy, Dr. T. G. Thomas read an essay on the "Intravenous Injection of Milk," as a substitute for the transfusion of blood.

His observations extend to seven cases, all gynecological subjects, with five successful results.

His *à priori* grounds for resorting to milk were based on the physical and chemical resemblance of that fluid to the chyle which is physiologically poured into the left subclavian vein, and his con-

clusions that milk is equal in efficacy to blood and free from many dangers inherent in blood transfusions appear to be warranted by his clinical results. The cases were related with great fullness of detail, but the history of this use of milk, prior to the inception of these experiments was almost ignored, perhaps necessarily so, from the failure of physicians to put on record the isolated cases in which it had been resorted to. If it comes to be a vital resource in therapeutics it must doubtless stand to Dr. T.'s credit.

Many precautions are to be observed in the procedure. The milk must be perfectly fresh, not over a few minutes from the cow, since from the very moment of its issue from the udder, chemical and physical changes begin in it which may communicate a septic influence to the blood mass. The cow should be milked at the door of the patient's residence, by clean hands, into a clean pail covered with fine gauze; and the milk should be slightly alkaline, and maintained at a temperature of 99 or 100° Fah. during its flow into the vein.

The best infusion apparatus is a glass funnel connecting with a small silver canula by means of a short India rubber tube. Proper care is taken to exclude air, and to support the funnel steadily; and from five to eight ounces of milk are allowed to flow slowly into the median basilic or cephalic vein. The immediate effect is often quite unpleasant and even alarming, as the pulse may become very rapid, the respiration of a sighing character, which together with chills or tremors, denote a profound impression upon the nervous system. But these soon subside, and in every instance they were followed by marked signs of amelioration.

The process may be repeated upon the return of the original indications, which may occur as often as every twenty-four hours; but in Dr. Thomas' experience no case required the repetition more than five times.

It is to be hoped that the results of these experiments will inspire others, conducted in a similar intelligent manner, and if a confirmation is obtained of the favorable effects of milk thus administered, in anæmia, spanæmia, and the adynamic and athreptic diseases and conditions, generally the way will be opened to its application through a much wider range than Dr. T. has yet ventured upon.

The transfusion of blood in spite of its rational promise and its

apparent simplicity, and notwithstanding the close study and mechanical ingenuity which, for two centuries has been brought to its aid still remains an opprobrium, a formidable resource which the bravest therapeutic hand grasps only when other means are exhausted. It should be stated that all of Dr. T's. cases were benefited by the treatment, and but for serious visceral complications in two there would probably have been no death to record.

Dr. L. A. Sayre gave one of his brilliant demonstrations in the mechanical treatment of Pott's disease, at the meeting of the New York County Society, April 22d. Patients, old and young, were introduced to exhibit the complete cures effected by his method; and scores of braces and other instruments of devilish ingenuity in which the poor wretches had long writhed in torture, covered the tables and presented a marked contrast to the simple plaster and bandage corselet in which they finally found comfort and cure.

It was interesting to note the breathless surprise of the large number of physicians present, when the suffering humpbacks were taken down from the suspension tripod, straightened in form, increased in stature, and free from pain. It was almost incredible that such immediate effects were obtained! The process is an extremely simple one, and so careful has its author been to describe it in every detail, in his own books and in magazine articles, that no excuse is left to any practitioner in this broad land for ignorance of it. But it must be done properly to be effective, and its very simplicity lays the way open for error. I need not describe the various steps, for those of your readers who desire to inform themselves, and to save their patients the trouble and expense of long travel in search of an expert, should buy Dr. Sayre's book, which, having caught some of his vigor of logic and expression, cannot fail to teach them a "thing or two."

Nothing since the discovery of chloroform is to be compared in the blessings it brings to humanity with this device.

Between 1600 to 1700 cases within the past five years have passed under Dr. Sayre's hands from "death to life," as it were, to bear witness against those who decry the method and its author. The question of its priority is not the prominent one in the minds of those for whom the process has been perfected. Few practitioners indeed doubt that the conception was an original one with Dr. Sayre; certainly his genius devised the method, his skill perfected

it, his persistence has vitalized it, and his vigor has forced it over the bars and gateways of prejudice. Let those who dispute the claim of priority, hang their heads in shame that if they really did know of and do this thing before Lewis A. Sayre they had neither the sense to estimate its value nor the power to give it life. If it were their child it was still-born, and such things are better buried. I think, however, Dr. Sayre himself gave them all the coup de grace in reading before the County Society an extract from an old book, to show that suspension in the treatment of Pott's disease was in use *more than two hundred years ago*. The JOURNAL is pleased to present this interesting point to its readers, on another page of this issue.

The discussion of the abuses of medical charities continues, being now before the County Society in the shape of a series of resolutions which have been referred to the comitia minora for examination and report. There is very little hope, however, that the evil will be remedied, until the Legislature shall enact that the failure to pay a doctor is equivalent to stealing from him, and ought to have the same penalty.

Dr. Nathan A. Bozeman, of button suture fame has been latterly appointed consulting surgeon to the Woman's Hospital, in the place of the late Dr. Peaslee. The appointment is eminently a fit one, but we cannot help deploring the irregular manner in which it was effected.

According to the By-Laws governing that Institution, the appointment must be made by the Board of Managers, from the nominations sent to them by the Board of Surgeons. There was unanimity in the Board of Surgeons, in presenting the name of Dr. Carroll Lee, who has so long, faithfully and with great skill rendered service as a resident Surgeon, and it was thought that he was fully entitled to the succession.

The Board of Managers, with equal unanimity ignored the nominee and appointed Dr. Bozeman. I do not hear that there was a special commission created to give the By-Laws sufficient plasticity to legalize the action of the Lady Managers, but *foemina non habet legem*, and their count is good against all mankind.

Dr. Bozeman will doubtless confer benefits upon the Hospital quite commensurate with the honors offered him, and your pages, I trust, may occasionally shine with his light.

There is about to issue from the press of G. P. Putnam's Sons, a new and valuable work on "Stricture, its consequences and the methods of its cure," by one of our eminent authorities on that subject, Professor Fessenden N. Otis, of this city. I believe that the experience of Dr. Otis in this direction is as large as that of any practitioner in the world, and what he says should come to us with the force of authority.

Perhaps that your readers are aware that for sixteen years or more he has taught that very slight contractures in the urethra, undiscov-
erable by ordinary methods are often the cause of serious troubles, reflex and direct; and that chronic urethral discharges are not infrequently due to slight strictures. He likewise holds (and it may be regarded as holding an important place in his views on stricture) that the calibre of every urethra bears a close definite relation to the size of its penis, and that the canal is normally smooth and nearly uniform throughout. If even a small contraction takes place at any point, although it may offer no obvious obstacle to the flow of urine, yet it may give rise to conditions, local or general, which entail both discomfort and danger.

Thus, if a urethral calibre of 30 mm. (circumferentially) be normal, a diminution at any point to 29.5 mm. (that is reduction of only 0.5 mm.) is sufficient to set up a train of pathological symptoms, which will not disappear until the normal calibre is restored.

My own observation, kindly favored by Dr. Otis, confirms these views, but like all innovations, however meritorious, they have been opposed by many—some though, of different conviction, some holding preconceived ideas, some bound in the swathing bands of prejudice, and some objecting to have their peaceful repose disturbed by either new facts or theories upon matters which they learned long before we were born. Many of the best minds, from those of the range of Berekeley Hill down, have acceded to Dr. Otis' views and doubtless after the issue of his book the accession will become quite general.

From Baltimore, I learn that Dr. Alan P. Smith, at the late meeting of the Medical and Chirurgical Faculty of Maryland, read a statistical paper on his operations for stone.

In fifty-two cases not a single death has followed; a record without parallel in the annals of surgery, as the most favorable experi-

ence hitherto has not been able to reduce the fatal percentage below twelve.

A most remarkable anomaly presented itself in one of these patients. A man came to Dr. S. for treatment with symptoms of stone. The urine was alternately clear and muddy. Thorough use of the sound discovered no stone, the case altogether appeared very perplexing and no reason could be found for the varying physical appearance of the urine. Finally a very close examination disclosed that there were *two urethræ* in one penis and upon sounding through the second one a stone was discovered which demonstrated that there were also two bladders. A lithotomy was successfully performed, and the patient made a speedy recovery, micturating naturally through one of the urethræ during the whole period of convalescence.

I desire to call attention to the investigations of Dr. James Tweedy and Dr. Sidney Ringer, of London, into the action of the extract of *Duboisia Myoporoides*, since the results they obtained bear indirectly upon a paper on the Mechanism of Accommodation, which your correspondent had the pleasure of reading before the Ophthalmological Society of this city, on April 8th. The *Duboisia* is a shrub indigenous to Australia and has been shown to possess mydriatic properties identical with those of atropia. The experiments of Drs. Tweedy and Ringer, likewise show that it has an antagonistic action to muscarin, as it tetanizes the heart and the smooth muscles, and in some animals (batrachians) induces tetanus of the entire voluntary muscular system.

It will be remembered that many investigators hold similar views in respect to belladonna and other solanaceæ; and clinically it seems to be put beyond doubt by the phenomena of the arrest of glandular function, and of night sweats, &c., so familiar to all. But upon the ciliary muscle it has been held that atropia (as the type) exerts a *paralytic* influence. Why this exceptional effect on the ciliary muscle is claimed I cannot conceive unless it is done in the interest of the Helmholtz theory of accommodation, of which in the paper alluded to I have endeavored to demonstrate the fallacy.

That paper is altogether too technical and special for your pages, but I would simply state that the theory it advances is precisely the reverse of the Helmholtz theory, and is based upon a study of the anatomical arrangement of the ciliary muscles and the action of atropia and other solanaceæ. It will be published. DER.

MILK SICKNESS.

WEAVERVILLE, N. C., January 26th, 1878.

I am glad Dr. Woodfin is writing on Milk Sickness; there is no man in the State better qualified to do the subject justice than he, as his experience is greater than any man in the State, with that terrible disease.

As it is desirable to know all we can in regard to it, I have thought that it would be acceptable to give the opinion of another who, like Dr. Woodfin, has had to combat it for years in a different locality.

There is a creek in Middle Tennessee, near Hartsville, called Goose Creek. This creek has three branches. Between the west and middle parts there is a very rich knob, called Millstone Knob, always covered by a dense growth of cane. It is here that the poison which causes milk sickness, or whatever it is, abounds.

This disease was treated by Dr. Yandell, the father of Professor L. P. Yandell, of Louisville Medical College, as far back as 1812 or 1814, under the name of "The Puking Fever."

Dr. D. W. Mentlow, says, in regard to the disease at this particular locality, "Some contend that it has its origin in vegetable matter growing in the immediate vicinity of the Millstone Knob, others that the atmosphere surrounding this knob becomes contaminated by some means, they know not how, and that animals breathing this poisoned air during the night become affected. Some ascribe it to animalculæ floating in the atmosphere; these are inhaled by the lungs of the animal, and by this means the poison enters the system." And, lastly (and correctly as we think) "some contend that it is a mineral poison, rising from the earth during the day in the form of halitus or gas, and settles on vegetable matter during the night. In this way cattle that are permitted to *run out during the night* contract the poison by feeding on the bedewed vegetation." This seems to me to be the most plausible theory: for it is well known by all who live in the vicinity of the poison, that the most dangerous time is when the dew is on vegetable matter; consequently many keep up their milk cows, until the sun has evaporated the dew in the morning, and drive them up before it begins to settle in the evening; these escape with impunity, notwithstanding they graze on the Millstone Knob during the day. As further

evidence that it cannot be a vegetable poison, Dr. M. D. L. F. Sharp and myself were requested by some of the Professors in the Pennsylvania School of Medicine, in 1826, to collect every species of vegetable on and around the Millstone Knob, dry them in the shade, and send them to Philadelphia, that they might be submitted to the most rigid analysis ; and we did so. In a few months we heard from these same Professors who reported that they had tested every vegetable, and found them entirely innoxious." They also tested a mushroom from the same knob with like result. Dr. Mentlow says, "From these indisputable facts, and from all that I know respecting the cause of milk sickness, the conviction forces itself upon my mind that the cause resides in the earth, and near its surface, and that it is exhaled by the sun during the day, and settles on vegetable matter during the night."

This poison differs from all the known poisons in the world, in the following particulars :

1st. It lies quietly in the system for a long time without exhibiting any of its toxical powers, until the person or beast is forced to take exercise.

One of my neighbors concluded to winter his mules on this knob, as the green cane was very abundant, believing that nothing would kill a mule, but to his astonishment two or three out of five died. Capt. Thompson drove his cattle to this knob some years ago for the purpose of wintering them on the cane. They remained during the winter, and seemed to do well ; but in the spring of the year when he attempted to drive them home, thirteen out of twenty died.

2d. It is more ethereal and diffusive than any known poison to me. Most of the poisons with which I am acquainted affect the stomach and bowels, the brain and nervous system ; this pays no court to either, but extends through every muscle, bone, and tendon, affecting the whole system ; yes, even the skin and cellular substance under the skin. It will be remembered that I stated that Capt. Thompson lost thirteen of his cattle, as he was driving them from the Millstone Knob. He had them skinned, and the hides were hung on poles between his cribs ; the rats being quite numerous, they gnawed the cellular substance from the hides, which was so poisonous as to kill every rat about his cribs. This circumstance

alone proves the great diffusibility of the poison, finding its way even to the skin and cellular substance.

It is known by all the old settlers in the neighborhood of Harts-ville that if a cow should die of this poison, and a *hog* should eat of the cow, the hog will die; and if a dog should eat of the hog, the dog will die; and if a buzzard should eat of the dog, the buzzard will die. A gentleman on Goose Creek, near this knob, put up his hogs to fatten; he had a cow that was complaining; he turned her in with the fattening hogs; she died in a short time; the dogs ate part of her flesh, which killed every one, some thirty in number. A Mr. Hall and his wife were poisoned and died by eating a chicken that had been poisoned by picking some of the flesh from a cow that had died with the milk poison."

The above cases goes to show, as Dr. Woodfin says, that the poison of milk sickness is entirely *sui generis*, not like any poison known in medical books. It will be seen that there is a difference in the opinion of Dr. Woodfin and Dr. Mentlow in regard to the effect of this poison on hogs; and also in regard to cattle dying which do not eat of this poison except while the dew is on the vegetation. I must incline to the opinion of Dr. Mentlow, as the experiments were continued until they found by putting dry hay on this knob of a night and feeding it to a cow in the morning while it was wet with dew, that the cow died; but if they let the hay dry before it was fed it had no bad effect on the cow to which it was fed. As to the symptoms there is but little difference between the two. I will not give Dr. Mentlow's treatment until I see Dr. Woodfin's, and if there is any material difference in their treatment I will give the profession that difference, as we desire to have the subject thoroughly ventilated.

J. A. REAGAN, M. D.


Cæsarian Section in North Carolina.—The only cæsarian section reported by Dr. Harris in his article on Gastro-Hysterotomy in the *American Journal of Medical Sciences* for April, was one by Drs. Mallett and McSwain, of Fayetteville, in 1862, (mother lived and child died) and another by Drs. J. R. Hicks and Wm. F. Henderson, (mother lived and child died).

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DEROSSET, M. D., 15 West 26th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

 *Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.*

THE MANAGEMENT OF THE MEDICAL SOCIETY AGAIN.

In an editorial in our last issue we called attention to what we conceived to be faults in the management of the State Medical Society. Several letters have reached us, complaining bitterly of the injustice we have done some of the most eminent members of this venerable body.

If, at the time we penned these lines, there had been in our mind any personal application of our criticism, the article would not have appeared. We disavow entirely any intention to charge any officer or member with criminal acts, as our words have been perverted to mean.

We attempted the thankless task of directing the attention of the profession to what had been done wrong, in our opinion, with a view of showing how it might be corrected. We thought a disproportionately large amount of attention was paid to the "politics" of the society and too little to the earnest work of medical scien-

tific progress. Friends of the society, present at the meeting, complained that our growth and elevation were being retarded by such disproportionate attention to the needs of our organization. We believed that their opinion was worthy of great weight, and it coincided with our observation. But because our opinion was such, and we were bold enough to so express it, we do not see that we necessarily array ourselves personally against any officer or member.

Personally we have no grievances to correct; as editors though we are determined to give our influence to the promotion of the symmetrical and healthy growth of our Medical Society. If what we have said formerly made a different impression, a longer acquaintance with our course will be a sufficient answer. If our personal friendship with the gentlemen is not an assurance of our guiltlessness of offering personal affront, and if this statement does not show our intention to aim at the good of the medical profession and the Medical Society of North Carolina above all else, then they must have an incorrect conception of the spirit in which we have entered upon our work. We want friends, and would not offend any by our opinions; but if we are not to speak of family failings, who then? We have tried to speak kindly but earnestly, and if we have offended any it has been through that active zeal which we have for our State Medical Society, and the Medical Profession, preferring their interests above all personal considerations.

CONTRIBUTION TO THE HISTORY OF MEDICAL EDUCATION AND MEDICAL INSTITUTIONS IN THE UNITED STATES OF AMERICA, 1776-1876. BY M. D. DAVIS, A. M., M. D.

This special report has brought together much historical matter, which otherwise would have been unknown, and is remarkably full as to the history of medical schools.

We would like to ask Dr. Davis to make the following addition to his historical items of medical interest, if he should ever revise this report.

There was a Medical Society in existence in North Carolina in 1801. Its organization was not very unlike many of the older societies then in existence. Its Board of Censors had the power of conferring a license to practice. In the first meeting, the record says, "Mr. Charles Smith presented himself for membership, and having been examined by the Censors in the presence of the Society, was admitted to membership."

In those days the feeling of national reliance was high among the doctors in this State, and in order to drive foreign drugs out of the market, premiums were offered for those raised in the country. Among the premiums offered was twenty-five dollars for the largest quantity of opium, in quantity not less than five pounds. Premiums were offered for rhubarb, castor oil expressed without heat, and senna.

The first paper read was by Dr. J. Webb, of Hillsborough, "On the Causes, Symptoms and Treatment of Gout and Rheumatism." The subject for discussion announced for 1803, was "Cholera Infantum."

How long this Society existed we do not know. But in 1849 a new Society was formed, adopting the Code of Ethics of the American Medical Association. With the exception of the four years of war, these meetings were uninterrupted, harmonious and profitable. This is not the time and place to give an outline of the present Society; we only desired to fill up the gap which Dr. Davis has left. This task of putting the record of our State before the world correctly, it seems is not confined to the daily secular press. It must be that North Carolina is as little known as a foreign State, at least she is as much ignored by the average historian.

The Nails.—Mr. Jonathan Hutchinson in a recent lecture on diseases of the nails says: The transverse markings on the nails seen after severe illness, indicates interference in their nutrition. A record of relapse or exacerbation permanent during the life of the nail, is left on its surface in the form of a transverse furrow. As the age of an oyster may be reckoned by counting the ridges on its convex shell, so in these cases may the number of relapses and the relative duration of the intervals be estimated.

REVIEWS AND BOOK NOTICES.

HAND-BOOK OF THE PRACTICE OF MEDICINE. By M. CHARTERIS, M. D., Professor of the Practice of Medicine, Anderson's College, Glasgow ; and Physician and Lecturer in Clinical Medicine, Glasgow Royal Infirmary. With illustrations. .Lindsay & Blakiston, 25 South 6th Street. Philadelphia, Pa. Pp. 336.

The volume before us is one of the Student's Guide Series, and presents a very attractive mechanical appearance. But turning from the great works of Copeland and Trousseau, and Ziemssen, we may well wonder if our little volume can have traversed the whole range of medicine. To our very great surprise we find a volume of much merit, and one that should be welcomed by the student and even the practitioner as a capital remembrancer. As far as we have had time to examine it, it treats upon the main important matters daily encountered by the physician.

Under the head of Cardiac Murmurs, the diagnostic signs are succinctly and clearly outlined, enabling the student by a short process to master difficulties of great importance. Such diagnostic helps we notice under several other important heads, placing the student or physician directly in the way of making out his case. The art of condensing in a clear manner the science and art of medicine, belongs to our author in a marked degree. Of course there are omissions, and some of the articles are treated as secondary, which, to the American student are of prime importance, notably the articles on the malarial fevers ; but upon the whole the descriptions are satisfactory. By the artist's help several good etchings and schematic drawings illustrate the text. One etching on "Typhoid Ulceration of the Ilium," another of "Tenia Echinococcus from hydatid cyst of the Liver," another of "Urinary Deposits," another of "Renal Casts, Mucus Globules, Vibrios, Bacteria and Spermatozöa," &c.

The appendix of formulæ is very convenient and useful, embracing for the most part articles from the Br. Pharmacopœia. The medical student who masters this little volume will be well on the way for the enjoyment of the more elaborate treatises, and as the average student is not slow to recognize a friendly helping hand, we predict the exhaustion of a large edition of this book.

PRACTICAL GYNÆCOLOGY. A Hand-book of the Diseases of Women. By HEYWOOD SMITH, M. A., M. D., Oxon, &c., &c. With illustrations, pp. 205. \$2 00. Lindsay & Blakiston.

This book is another of the Student's Guide Series, but does not fulfil its purpose as completely as the work above. Its arrangement though, will greatly aid the student by bringing forcibly to his mind and in a natural order, all the important knowledge under each head treated, so that it can be easily memorized. The practitioner, however, who finds himself with a difficult case on hand will hardly find much comfort or aid, especially if he has already learned to rely upon Thomas' great work upon the same subject. Whatever may be the opinion of reviewers, such books are very popular and will be bought up by students and physicians with nearly as much eagerness as were Neill and Smith's Compend and Ludlow's Manual, by Confederate candidates who were expecting to go before the Army Medical Boards. If they bring as great prices the future of the publishers will be quickly made.

MEDICAL ANNOTATIONS.

ANALYSIS OF FIVE HUNDRED CASES OF OPERATION FOR STONE IN THE BLADDER.

By SIR HENRY THOMPSON, F. R. C. S.

Reported to Royal Medical and Chirurgical Society, Mar. 12, 1878.

[*London Medical Examiner.*]

The 500 cases were in adult males, that is, of twenty years old and upwards, the great majority being from fifty to seventy years. The mean age was sixty-one and a half. They comprised Sir H. Thompson's entire and unselected work from the first case up to January, 1877. The published experience of Cheselden, Martineau, Brodie and Fergusson was recorded. The sum of similar cases treated by them was 422. Of the 422, sixty-nine were fatal, or 16½ per cent., i. e., one in rather more than six cases. Of the 500 in question, 422 were by lithotrity, and 78 by lithotomy. The number of individuals operated upon was 420, several of the lithotrity patients be-

ing operated upon twice, a few three times. In all cases a considerable interval and evidence of fresh formation, mostly a newly-descended uric acid calculus, had existed. Small phosphatic concretions, although removed by lithotrity, were not reckoned as stone in the bladder. The chemical constitution of the calculi was as follows:—Uric acid, 313; phosphatic, 99; mixed, 81; cystic oxide, 1; pure phosphate and carbonate of lime, 2; phosphatic calculi formed on foreign bodies, 4. The mortality, accepting almost any death occurring within six weeks of the operation, was as follows:—In 422 cases of lithotrity, 32 deaths or 1 in 13 cases; in 78 cases of lithotomy, 29 deaths, or 1 in $2\frac{1}{2}$ cases; in the total 500, 61 deaths, or 2 deaths in $8\frac{1}{4}$ cases. The causes of death which were given in each case, were tabulated, compared and contrasted in two operations, with references thereupon. The accidents met with in operating by each mode were detailed, and the manner in which they were dealt with. The general inference was arrived at, that it is unwise to apply, as a rule, lithotrity to any stone above moderate size; and if any calculus be sufficiently large to require what is known as the fenestrated instrument, it is better to employ lithotomy. The author had not employed such an instrument in the last ten years.

SIR JAMES PAGET said the present might be considered a fair time for re-considering the question of the comparative advantages of lithotomy and lithotrity. His own experience had been less than that of Sir H. Thompson, but he must confess to a growing preference for lithotomy. Sir Henry Thompson's experience showed that the best obtainable results of lithotrity had been arrived at, at least for some time to come. Much improvement might be expected in the after treatment of lithotomy.

SIR H. THOMPSON concluded by saying that lithotrity was the best operation when the stone could be removed at two sittings. Accidents attending lithotrity were generally due to undertaking to crush too large a stone. Early detection of stone was to some extent due to the reluctance of many patients to believe they had stone.

LITHOTRITY BY A SINGLE OPERATION.

Professor Henry J. Bigelow, M. D., of Harvard, contributes two articles to the *Boston Medical and Surgical Journal*, (Feb. 28 and March 7) on lithotrity. A resumé of such an important article can hardly give a just estimate of its merits and we advise our readers interested in this branch of surgery to read the originals. "Gentleness, dexterity, and experience are especially to be valued in lithotrity," says Dr. Bigelow, a prefatory injunction of great importance. "The average bladder and urethra have no extreme susceptibility, as is attested by the generally favorable results of lith-

otrity, and even of catheterism, which are practiced with varying skill everywhere. * * * * * If we remember that in the case of the presence of a mulberry calculus, it clasps the stone at every act of micturition, often with a persistent gripe, the comparative immunity of its tender mucous membrane is quite remarkable. * * Polished metallic surfaces carefully manipulated can hardly do so much damage, as the agencies enumerated."

Sir H. Thompson assigned two minutes as the duration of a sitting, but since he has used anesthetics he recognizes the advantages of a longer sitting. Dr. Bigelow's conviction is, that it is better to protract the operation indefinitely in point of time, if thus the whole stone can be removed without serious injury to the bladder. If the bladder is emptied of detritus, we have as little to apprehend from fatigue of the organ, as from the alternative of residual fragments and further operations.

Dr. Bigelow has devised an instrument figured in the *Journal*, which in his hands has succeeded very well in removing detritus. "The successful evacuation of the bladder depends upon several conditions, both in the apparatus and its use, which, for distinctness may be enumerated separately. A large calibre of the evacuating tube, with a calibre at least seven-sixteenths of an inch—31 Charrière. The tube should be straight or curved near the extremity, the latter to be used with the curve downward. The receiving extremity should depress the bladder when required to do so, and thus invite the fragments, while its orifice remains unobstructed by the mucous membrane. The directions for the manipulation of the bulb and evacuation of the fragments are given in minute detail and illustrated with wood cuts.

Dr. Bigelow's excellent results are very enticing and no doubt that by his elucidation of the subject much advancement will be made in lithotrity, but the great number of cases to be operated upon to give one the skill to crush "soft stones weighing 1230 and 1270 grains a piece" will deter the general surgeon from "referring it to lithotomy.

SUFFERING FROM DEPRIVATION OF WATER.

Dr. J. H. King, U. S. A., reports a very interesting account of the sufferings of a detachment of Co. A., 10th Cavalry, under Capt. Nolan, while scouting on the "Leano Estacado" or "Staked Plains," Texas. (*Am. Jour. Med. Sciences*, April, 1878.) For eighty-six hours this command toiled over an arid plain, under a tropical sun, without a drop of water.

On the third day the "desire for water became uncontrollable. The most loathsome fluid would now have been accepted to moisten their swollen tongues and supply their inward craving. The salivary and mucous secretions had long been absent; their mouths and

throats were so parched that they could not swallow the government hard-bread; after being masticated, it accumulated between the teeth and in the palate, from whence it had to be extracted with the fingers. The sensibility of the lingual and buccal mucous membranes was so much impaired that they could not perceive when anything was in their mouths. Brown sugar would not melt in their mouths. Vertigo and dimness of vision affected all; they had difficulty in speaking; voices weak and strange-sounding; and they were troubled with deafness, appearing stupid to each other; they were also feeble and had a tottering gait. Many were delirious, and sleepless.

They resorted at this stage to horse's blood, but the poor animals had been so long without water "that their blood was thick, and coagulated instantly on exposure. * * * The heart and other viscera were grasped and sucked as if to secure even the semblance of moisture. * * * Their own urine was very scanty and deep colored, but of it they drank freely, first sweetening it with sugar. * * * They became oppressed with dyspnoea, and a feeling of suffocation as though the sides of the trachea were adhering, to relieve which they breathed with closed lips, prolonging the inspiratory interval as much as possible.

Providential relief at length came by their reaching "Double Lakes." Their thirst was insatiable, and they kept filling their stomachs until they vomited and kept repeating the process. Warm coffee was the only thing that revived them.

"Although water was again and again imbibed, even to the repletion of the stomach, it did not assuage their insatiable thirst, thus demonstrating that the sense of thirst is, like the sense of hunger, located in the general system, and that it could not be relieved until the remote tissues were supplied. The same cause is competent to explain the overpowering dyspnoea which threatened the existence of these men; for only moist membranes allow the free passage of gases which must take place in respiration.

The superior endurance of the mule over the horse was obviously manifested on this scout. The horses tongues were swollen, mouths and systems generally affected similar to the men's. They could not chew or swallow grass; many gave out completely. On the other hand, the mules, comparatively unfatigued, would crop the grass and graze at every halt.

Capt. Nolan's loss was two men dead and two missing.

ABINGDON ACADEMY OF MEDICINE.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—Believing that you and some of your readers would like to have some information about what is being done by the medical profession in this section of Virginia, I send you a short ac-

unt of the last meeting of the above named Association. You will observe that we entertain kind feelings towards the physicians of your State. The present President of the Medical Society of North Carolina, Dr. R. L. Payne, of Lexington, was elected an honorary Fellow of the Academy of Medicine, several years ago. By the by, we regard him as a whole souled "fellow" in every sense of the word. He attended, with Dr. Bahnson, of Salem, the meeting of the Medical Society of Virginia, which convened in this place in 1874. Both gentlemen made fine impressions on the minds of our physicians and "the people" with whom they became acquainted.

The regular annual meeting of the above Association was held at the residence of Dr. H. M. Grant. Several members from the county were present. The following gentlemen were elected for the ensuing year :

Dr. J. S. Apperson, President.

" R. J. Preston, 1st Vice President.

" Jas. W. Ogden, 2d " "

" Geo. E. Wiley, Recording Secretary.

" W. F. Barr, Corresponding "

" H. M. Grant, Treasurer.

The next meeting will be held at Dr. Wm. L. Dunn's, Glade Spring. Subject for discussion: *Typhoid Fever*. *Essayist*: Dr. W. F. Barr.

Dr. Alderson, of Meadow View, was elected a member.

Delegate to the Medical Society of North Carolina—Dr. E. M. Campbell. Delegates to the American Medical Association, which meets in Buffalo, N. Y., June next—Drs. W. F. Barr, Wiley and Alderson.

The following gentlemen were elected Honorary Fellows—Dr. Samuel Dunn, Glade Spring; J. S. Wellford and Hunter McGuire, Richmond, Va.; Wm. Selden, Norfolk; W. G. Thomas and M. Whitehead, of North Carolina; Horatio Storer, Boston, Mass. and Robert Battey, of Georgia.

Very respectfully,

W. F. BARR, Cor. Sec.

Abingdon, Va., April 25th, 1878.

DOMESTIC OXYTOCICS.

Following a domestic tradition, Dr. Long, of Louisville, proposes *Loradendron flavescens*, (which he incorrectly calls *Viscum album*, is being the European *Mistletoe*) as an oxytocic. He makes a decoction, (and in this form he prefers to administer it,) by pouring a pint of boiling water on two ounces of the dried leaves, or four ounces of the green leaves. Two to four ounces may be given at a dose, as a substitute for ergot.

Ustilago zeæ (Schweinitz,) *Ustilago maydis* (Tulaisne) *corn smut*, is another candidate for professional favor as an oxytocic, and is fast growing in popular favor. This fungus is now undergoing a professional test which will determine its value. It is easy to be misled by early results of drugs possessing the wonderful properties of contracting the womb, and our contributors will do well to write specifically their observations. Crude observations are apt to result in such a reaction against the medicine as to consign it to oblivion, when really it may be possessed of genuine power.

A fluid extract of *Ustilago zeæ* is prepared by several wholesale dealers, but it is easy enough for the practitioner to collect the fungus, and make the preparation while it is fresh, as it is easy to obtain. Many of our farmers will be glad to know that such vile pests as are the mistletoe and corn smut, can be turned to some account, and would be willing, no doubt, to see both of them become as scarce as peruvian bark is now.

COLLECTANEA.

AMERICAN MEDICAL ASSOCIATION.

The Chairmen and Secretaries of the several Sections of the American Medical Association, are requested to send in (by title) the papers to come before them, with the time required for reading. Also, all gentlemen having papers to present, not referable to the Sections, will send as above, without delay to

THOS. F. ROCHESTER,
Chairman of Committee of Arrangements.

Buffalo, N. Y.

KNOT OF THE CORD DIAGNOSED BEFORE DELIVERY.

Professor Alexander Simpson related the following case to the (April 10th) meeting of the Obstetrical Society, of Edinburgh. He was called on March 21st to the fifth confinement of a lady. On examination he found the first stage completed, and the head passing through the os uteri, with the membranes intact. When the head had reached the floor of the pelvis, the right ear could be felt just behind the arch of the pubis. On trying to make out its outline further, he detected the pulsation of the funis with an irregularity in it. The membranes were kept intact until they pro-

truded through the vulva. When the child was born the irregularity was found to be in a knot, and the cord itself was coiled three round the neck. The child, a strong boy, after a few turns from side to side, according to Marshall Hall's plan, soon cried lustily. Chantreuil (*Thèse des Disposition du Cordon*; Paris, 1878, p. 115) gives three factors in the production of knots:—1st. Length of cord. 2d. Movements of mother. 3d. Exaggerated movement of the fœtus. In this case the first two were present, as the cord was thirty-five inches long, and the intra-uterine movements of the child has been so vigorous as to prove even distressing to the mother. Dr. Read (*Am. Jour. of Med. Sciences*, 1861, XLII, 381,) in an excellent paper argues that the knots are tied during labor, and not during the child's intra-uterine life. In this case the facts that the knot was only nine inches from the umbilicus of the child, and that it was felt completely formed during labor, go far to prove that it was tied previous to the coiling of the cord round the neck.—*Medical Examiner*, London, April 25th.

Dr. Ferrier in a late lecture on "Localization of Cerebral Diseases," says the "American Crow-bar Case," has lately been appealed to by Dr. Dupuy as showing, that lesions of the so-called motor region may occur without paralysis. * * * * * This case is quoted as one in which the man suffered no damage bodily or mentally. The true history of the case as shown by the account furnished by Dr. Harlow, shows that the man's mental condition was so changed, the animal predominating over the intellectual, passionate outbursts seizing a man who formerly conducted the affairs of his station with coolness and prudence, that his employers were obliged to put another in his place, as foreman in the quarry. 'After these facts I do not think it can be said with justice, that the man suffered no damage bodily or mentally, or that the case is in opposition to the experimental facts I have adduced as the effect of lesions of the frontal lobes.'

Cæsarean Section and Removal of the Uterus.—Professor Späth, of Vienna, recently made a Cæsarian section upon a woman in her ninth pregnancy, suffering with osteomalacia. After a living child was removed without difficulty, the bleeding continued to be considerable, although ergotine was injected. He concluded then to extirpate the uterus, which he did by means of the écraseur, and during all of the operation "Listering" was adopted. The patient made a good recovery, all pains heretofore caused by osteomalacia having disappeared. There is at least one advantage in the operation—the woman cannot again become pregnant. Professor Späth exhibited his patient to the Vienna Medical Society eighteen months after her recovery.

Prickly Heat.—A correspondent of the *Canadian Journal* speaks in high terms of the efficacy of the following formula for prickly heat :

Sulphur sublimat	80	parts.
Magnesiæ oxidi	15	“
Zinci oxidi	5	“

Place the powder on a plate and press a wet sponge on it. Rub the body with the sponge, to which now adheres particles of powder, and continue the application for fifteen minutes. Wash the parts clean of the adhering particles.

Baths of water at 95° to 98° F., and even hotter, have a decidedly beneficial effect upon the disease.—*Exchange.*

Marino's Anti-Neuralgic Injection.—Ergotine, one-fourth to one-fifth of a gramme, ($3\frac{1}{4}$ to 3 grains), water or glycerine, q. s. Dissolve for a hypodermic injection. It is employed in neuralgic pains and induces a more or less intense burning sensation, which disappears in the course of half an hour if the puncture be covered by cold wet compresses. Usually it induces neither abscess nor erysipelas. One, or at most, two injections relieves the pains, but, in order to prevent relapses, from two to six others may be given, according to the intensity and duration of the neuralgia. In tic-douloureux, these injections have proved very useful, while in sciatica they have often failed.—*Medical Times and Gazette, from Union Medical.*

Ice in the Rectum in Chloroform Narcosis.—In the *Gazette des Hopitaux*, March 23d, M. Baillée thinks that there is no more effectual remedy in narcosis produced by chloroform than that of introducing ice into the rectum. Dr. Vivian Poor in the London *Lancet* (Am. Ed., 1873) called attention to the same method in an article remembered now by chloroformists for this and other valuable knowledge contained in it.

Lady Doctors.—It has been wickedly remarked, that a lady who practices medicine commits two faults. She increases the number of doctors, and diminishes the number of women.—*Medical Times and Gazette.*

REPORT OF THE PROCEEDINGS
—OP THE—
MEDICAL SOCIETY OF NORTH CAROLINA.
TWENTY-FIFTH ANNUAL MEETING.

MORNING SESSION—FIRST DAY.

GOLDSBOROUGH, N. C., May 14th, 1877.

Society met at Goldsborough at 2½ o'clock, Tuesday afternoon, Dr. R. L. Payne, President, in the chair, and Dr. L. J. Picôt, of Littleton, Secretary.

The meeting was opened with prayer by the Rev. Mr. Marable, of Goldsborough.

In behalf of the community, Mr. A. K. Smedes welcomed the profession to the hospitalities of the town.

The President responded to the welcome, thanking the gentleman for the chaste and elegant manner in which he had couched his language.

Committee on Credentials was then appointed as follows :

Dr. R. J. Hicks, Chairman, and Drs. Charles Duffy, Jr., F. M. Rountree, Joseph Graham, A. A. Hill.

The following members answered to their names :

Dr. S. S. Satchwell, Rocky Point ; A. Holmes, Clinton ; C. T. Murphy, Clinton ; J. A. Gibson, Concord ; J. K. Hall, Greensborough ; Geo. A. Foote, Warrenton ; F. M. Rountree, Hookerton ; Jas. J. O'Hagan, Greenville ; Wm. Little, Raleigh ; J. H. Hicks, Weldon ; Thomas F. Wood, Wilmington ; J. F. Shaffner, Salem ; Robt. I. Hicks, Williamsboro ; Walter Debnam, Earpsborough ; G. W. Smith, Concord ; W. W. Lane, Wilmington ; H. Otis Hyatt, Clinton ; W. T. Ennett, Rocky Point ; A. G. Carr, Durham ; J. W. Hadley, La Grange ; Geo. L. Kirby, Goldsborough ; R. B. Haywood, Raleigh ; Josha. W. Vick, Selma ; Jos. Graham, Charlotte ;

T. Miller, Goldsborough ; Thos. J. Moore, Charlotte ; T. D. W. Smith, Fayetteville ; W. C. Murphy, Magnolia ; D. W. Bullock, Littleton ; W. C. McDuffie, Fayetteville ; Richard H. Lewis, Raleigh ; Geo. W. Graham, Raleigh ; H. M. Alford, Greensborough, and others we were not able to get. Honorary member, Dr. John A. Hill, Goldsborough.

Reading of the Minutes of the last meeting was dispensed with.

Report from the New Hanover County Medical Association was adopted and received.

Dr. C. T. Murphy came accredited from Clinton as a delegate from Medical Association of Sampson County.

Committee on Finance was appointed as follows : H. Otis Hyatt, T. D. Haigh, J. F. Miller.

Dr. R. J. Anderson, of Albemarle, offered his resignation, which being referred to the following Committee :—Drs. Shaffner, Smith and Gibson, was accepted.

The Secretary read several letters from gentlemen desiring to join the Society, although unable to attend the meeting.

A resolution was adopted that all applications for membership must be referred to the Committee on Credentials.

The regular paper on Diphtheria was appointed to be read tomorrow at 9 o'clock, A. M.

Dr. Little, of Raleigh, read a paper on the Suppression of Urine of 10 days duration. The patient, a female, suffered with intense pain and nausea. There was no swelling about pubic region, and upon introducing the catheter very little urine was drawn away. She finally succumbed.

Points of interest in this case were duration of the suppression with unimpaired mind, &c. There was no microscopical examination of the tissues, although a *post mortem* examination was made. The paper was referred to the Committee on Publication.

Dr. Charles Duffie, enquired if Dr. Little had employed Jaborandi in his case. He had used it thoroughly in several cases. Profuse salivation and sweating ensued, but unfortunately in all his cases where there was absolute failure of the kidney to secrete urine, death resulted.

A discussion ensued participated in by Drs. Thomas J. Moore and Joseph Graham, of Charlotte, but we were not able to get the notes.

Dr. W. W. Lane reported a case of chronic psoriasis vulgaris, and exhibited beautiful colored photographs of the disease. This case was treated with Goa powder without phosphorous internally, and is rapidly getting well. At Dr. E. A. Anderson's suggestion, he used gutta percha collodion, but abandoned it and returned again to Goa powder with success. The spots of psoriasis were scraped and washed, and the spots wet, and the powder rubbed on, and allowed

to remain. The resulting erythema was not stubborn. Dr. Lane had another acute case of psoriasis on hand, which he was treating in the same way, and expected good results.

Dr. Thos. F. Wood had seen these cases and confirmed the diagnosis of Dr. Lane. Goa powder owed its virtue to chrysophanic acid. It was found in rhubarb and yellow dock.

Dr. Charles J. O'Hagan rehearsed the history of the introduction of Goa powder, and the discovery that chrysophanic acid was the curative element. The diagnosis of psoriasis was not difficult and it is not contagious; it is not due to syphilis. Dr. O'H. thought perhaps, the success of the domestic treatment of skin diseases by yellow dock was owing to the presence of chrysophanic acid.

His remarks extended to the treatment of other forms of psoriasis and thought if Goa powder fulfilled its expectations, that it would take a permanent place in our *Materia Medica*.

Committee on Finance reported that the Society was out of debt, and there was a balance of \$203.00 on hand, and suggested the per capita assessment be made \$1.00 for the following year.

Dr. O'Hagan made an oral report of three cases of lithotomy, presenting some unusual features which he would name.

The first case was a youth 21 years of age found to have a calculus, which he removed by lateral operation. It was a phosphatic stone three inches in length. Of course, it was removed in direction of its long axis; the patient recovered. The weight of the stone was not stated.

Another case was that of a man 52 years of age. The peculiarity of this operation was excessive hemorrhage. Eleven days afterwards there was a serious secondary hemorrhage. Two handfuls of clotted blood were expelled. The calculus was oxalate of lime. Recovered.

Case third, of a 9 years old child. The calculus was cordate shape, and removed by the median operation. Recovered. The specimens were exhibited to the Society.

Dr. Lane read a case of double amputation of both legs below the knee in which the patient died from traumatic tetanus. Believing as he did that failures should be recorded with successes, he thought a useful lesson could be learned by a study of this case. Referred to Committee on Publication.

A paper on the Topography of the Diseases of Sampson County, was presented by Dr. W. C. Murphy, which will appear elsewhere.

STRICTURES BY OTIS' METHOD.

Dr. W. A. B. Norcom made some remarks on Otis' treatment of strictures. The great trouble which results from very small contractions of the urethra had not been properly recognized, nor its importance weighed. A patient of his, a young gentleman, had a small urethral contraction, and with it epilepsy. A division of the contracted urethra cured the patient entirely. He had never believed that such symptoms could arise from so small a cause until his attention had been fixed upon it by the writing of Dr. Otis. The urethra had never been measured exactly before Dr. Otis measured it. He had found the exact proportion between the penis and urethra, and invented a urethrameter which was absolutely accurate. Sir H. Thompson believed that 8 or 9 of the English scale was large enough to indicate a cured stricture, but had since modified his opinion. Dr. Norcom explained the way Dr. Otis used his urethrameter, exhibiting his instruments to the Society. The strictures of small calibre are treated by a bulb-end bougie. Recontraction of stricture after operation is due to the stricture not being entirely divided, and it was always the correct inference. Gleet is always accompanied with stricture ; cure the stricture and you will cure the gleet.

Dr. O'Hagan said that every one has to treat patients complaining of diseases of the kidney and bladder, with symptoms so vague and puzzling, that these cases were largely regarded as unsatisfactory. In many cases they were nothing but lessening of calibre of the urethra. The younger members of the profession must not be deceived by the remarks of patients in respect to their condition, but inspect the urethra before they ventured on a diagnosis.

Dr. Duffy believed that the urethra must be divided when the stricture was near the meatus ; divulsion will not do.

Dr. Hyatt has been in the habit of cutting the urethra in all cases of gonorrhœa, acute or chronic, because there is most always ponding of the gonorrhœal matter behind the contraction. When he failed he knew he had not cut deep enough, and tried again.

Dr. Wood used the dilator of Sir H. Thompson in preference to the urethrotome, and believed that the choice between divulsion

and cutting was very much as one had attained success with one or the other instrument. He had seen both succeed.

Dr. Potter had had like good success from dilatation without cutting, and always employed it.

Dr. Graham said that Dr. Otis' plan was to overcome the slight narrowing of the urethral canal, which was so often passed by as of not sufficient importance. The cure was effected when its calibre was restored, and not without.

COMMITTEE ON OBITUARIES.

The President appointed the following gentlemen a Committee on Obituaries: Drs. J. W. Vick, W. Debnam, H. Alford, and J. A. Gibson.

DR. SAYRE MADE AN HONORARY MEMBER.

Dr. Norcom moved that Dr. L. A. Sayre, of New York, be made an honorary member of the Society; unanimously agreed to.

DR. POTTER ON TREATMENT OF SKIN DISEASE BY ELECTRICITY.

Dr. F. W. Potter, related his experience in treating skin diseases with electricity—Squamous and eczematous eruptions had for a long time been treated by him, with good success, by means of the faradic current. He attached the soft sponge electrode, fixing the positive pole, and moving the negative all over the diseased surface.

SECOND DAY—MORNING SESSION,

GOLDSBOROUGH, May 15th, 1878.

Society assembled at 9 A. M., Dr. Payne in the chair. ♦

Dr. Shaffner, from the Special Committee, recommended that Dr. Anderson's resignation be accepted. Carried.

SECTIONS INSTITUTED.

Dr. Shaffner asked, in order to facilitate business, that the following resolutions be adopted:

Resolved, in order to systematize our work, and facilitate the transaction of business, there shall be instituted a series of sections, as follows: A section on Surgery and Anatomy; one on Obstetrics and Gynecology; one on the Practice of Medicine; another on Materia Medica and Therapeutics; and one on Microscopy and Pathological Anatomy.

Be it further Resolved, That there shall be appointed at each

annual meeting of the Society, a chairman of each section, such chairman to be selected by the President from those who exhibit a preference for any given section.

And finally, That all essays, papers and communications be submitted to the annual meetings of the Society by the respective chairmen of each section. Passed.

COMMITTEE ON NOMINATIONS.

The President announced the following Committee on Nominations: Drs. G. A. Foote, W. A. B. Norcom, W. C. McDuffie, J. J. Summerell, R. H. Speight, and W. T. Ennett.

DIPHTHERIA.

Dr. Chas. Duffy, Jr., of Newbern, read the annual essay on Diphtheria, by appointment. As Dr. Duffy's paper was referred to the Committee on Publication, we will not attempt its report.

Dr. Norcom thought that Dr. Duffy's address was admirable and exhaustive, but thought that he had omitted a remedy in his treatment, now much in vogue, which remedy was thymol. It had all the powerful properties of carbolic acid without being poisonous.

Dr. J. K. Hall, in continuation, also read a paper on the subject, which was referred to the Committee on Publication, therefore we do not attempt a summary of it.

Dr. McDuffie, of Fayetteville, made a few interesting remarks on the subject, detailing cases in his practice of pharyngeal paralysis, in which he kept the patients alive for some time by rectal alimentation.

Dr. Haigh, of Fayetteville, said, that he desired to enter his protest against the indiscriminate rejection of all local applications to the throat in this disease. He believed that there was an incipient stage, resembling very much follicular pharyngitis—in which stage careful examination would reveal generally in the sulcus posterior to or upon the tonsil a deposit which was not a false membrane, but of a fungoid character, the apparent nidus of the morbid matter. If this was destroyed, all febrile symptoms would disappear in eighteen to twenty-four hours, and the membranous exudation never would appear. When this deposit took place in the posterior nares or behind the velum, it frequently escaped observation and hence the fatality in these cases. Gentlemen speak of the pseudo-membrane as if it was the disease

itself—instead of a result of blood poisoning. He proposes, therefore, that when we see these cases in time, we should apply with a soft surgeon's sponge the following :

R

Tannin

Cupri Sulph. āā grs. x

Aquæ ʒ i.

M.

S. Throat-wash.

Apply once or twice very gently. As a general rule it will completely destroy the deposit, and act as a thorough astringent to the inflamed surfaces. Indiscriminate application to the throat after the first stage of the disease are certainly harmful. Use freely, also, a gargle of a strong decoction of red-oak bark. At the same time, give two teaspoonsful of Saturated Solution Potass. Chl. every hour. Do not give it in combination with other remedies, for he considers it simply of local use and not a blood remedy, and had never seen it of service in any but diseases of the mucous membrane and glands of this membrane—as typhoid fever, stomatitis, &c. He believed that many cases could be averted in their incipency, and though it had been his misfortune to meet with many cases of death from diphtheria, and some seemed to be fatal necessarily, still, he was satisfied that if the profession threw aside local applications in the incipency of the disease, there would be a far greater mortality. He did not desire to enter into the treatment of the disease after it had passed what he considered its first stage, because that had been fully discussed. As in all asthenic diseases, the supporting treatment must be correct. Nourishment every hour, and especially milk, with alcoholic stimulants used freely. Living in a turpentine region, it may be that our epidemics are milder than in other parts of the State, but certain it is that we do succeed in abating many cases which would eventuate in diphtheritic deposit if left to themselves.

Dr. Potter discussed the subject at length. He had had considerable experience in the disease, and noticed that it occurred near mill ponds and stagnant pools. He believed that it was a filth disease.

He had known several fatal cases circumscribed in the limits of the

Smithville garrison, and during the same visitation all the cases in the town recovered. Why the fatal line of demarcation should be so plainly drawn, was not yet determined. His treatment had been to use local applications of sulphurous acid, and internally, tincture of iron and quinine. He thought there were some strong reasons to believe that the disease was contagious, and cited a case in point. It was hardly necessary to say that nutrition was a matter to be kept constantly in view.

Dr. Thos. J. Moore, of Charlotte, agreed that malaria is associated with and affected by diphtheria; and thought that quinine should be largely used. His observation had led him to the conclusion that it is not confined to malarial regions; he thought that local applications are hard to make in young patients, and that some saccharine element ought to be used as a vehicle for medicinal substances, as well as steam applications, which he regarded as indispensable. Dr. Moore reported cases in his practice in young children, and one in a lady, who at the same time was nursing an infant, conclusively showing its communicability.

Dr. Bahnson was glad that some one agreed with him that the disease was enveloped in mystery. He believed that quick lime continuously sprinkled on the floor destroys the virus of the sputa, and prevents other cases from being so malignant. Saturating the sick room with steam from quick lime also, he thought was serviceable. He thought that tracheotomy in laryngeal complications ought always to be performed; even if a small per cent. only is saved by it. He mentioned several fatal cases in his practice after the operation. Dr. B., in course of tracheotomy sucked hastily, without thought, a mucous plug from a tracheotomy tube in the larynx, and was affected by diphtheritic virus; he was satisfied that the disease is communicable.

Dr. Joseph Graham, of Charlotte, thinks that the disease is infectious, propagated through the atmosphere and by contact. He has had considerable experience; has not been satisfied with any book treatises, and said many cases would get well without treatment, while some will die with the best treatment. He related some cases in which a father contracted the disease by the child's breathing into his mouth, and related a case in which he believed buttermilk cured the patient. The doctor maintained that if a patient

vomits without nausea he will die in less than five days, and thinks the extent of patches bear no steady relation to the malignancy of the disease. He had been affected in the same manner as was Dr. Bahnsen.

Dr. O'Hagan did not agree with Dr. Graham, as to the inefficacy of treatment. He believed that every effort should be made, however hopeless the case. He spoke of the antiquity of the disease, its cause, development and course, and said treatment was exceedingly valuable, necessary and appropriate. The first affection should have prompt attention to arrest the disease. He thought mild local applications of prime importance and that tracheotomy is useful, but, to be successful, must be performed at an early period before the bronchi are invaded; and that every effort to save the case should be made to the last. Dr. Graham thought that Dr. O'H. did not quite understand him. He too spared no pains in treating his patients by every means promising relief.

Dr. Wood dwelt particularly on the use of chloral hydrate to be applied by steam atomization, it proving a valuable agent in his hands. He said the patient would submit to this rather than to gargles, and that enough chloral was usually inhaled to produce a calming effect, putting many intractable patients in such a condition that they would take nourishment passively, at least. The antiseptic property of chloral was so well known that nothing need be said in its praise.

Dr. Norcom said that no treatment could be relied on unless it was stimulants or nourishment. Medicine was generally a secondary consideration, although he did not neglect to use various vaunted remedies.

Dr. C. T. Murphy thought food and stimulants the main bulwarks in the treatment. The doctor had used the stomach pump, putting food directly in the stomach, and kept the patient alive for thirty days. He says give food by the stomach pump if necessary, or, by enemata to the last.

Dr. Hines held that tracheotomy was out of place. He thought it bad surgery, not justifiable, and will not cure the disease, as he regarded it as constitutional, and the throat symptoms as only a local manifestation.

He was replied to by Dr. Bahnsen, who insists on the operation to prevent asphyxia.

Drs. Summerell and Moore also believe in the operation of tracheotomy when resorted to in time.

(The discussion of diphtheria as we report it above does not do the speakers justice as we are aware. It would be impossible to condense in so short a space an interchange of views that extended over nearly four years. We would be pleased to give the different speakers the opportunity of elucidating unnoticed points in their remarks.)

SUBJECT FOR DISCUSSION AT THE NEXT MEETING.

The President appointed the following gentlemen the Committee for the selection of a subject for discussion next year, and the essayist: Drs. J. R. Hall, Thomas F. Wood and G. W. Graham.

The Committee selected the subject of Spondylitis and its treatment, and Dr. M. Whitehead as the essayist.

Drs. H. T. Bahnson, G. G. Smith and D. G. Bullock, compose the Committee on Time and Place of meeting.

After some brisk competition, Greensborough, Edenton, Raleigh, Concord and Asheville being in nomination, Greensborough was fixed upon as the next place of meeting in 1879.

BOARD OF EXAMINERS.

The gentlemen below named constitute the retiring Board: Drs. R. L. Payne, G. A. Foote, Charles Duffy, Jr., C. T. Murphy, C. J. O'Hagan, W. A. B. Norcom and J. W. Jones.

Their sessions were held during the entire meeting. The method of examination is similar to the old plan adopted by most medical colleges. Each applicant is examined separately, the examiner noting his standing, by a scale of figures agreed upon by the Board. At the close of the session the standing of each is estimated and passed upon, when the successful applicant is eligible to membership in the Society. At no former meeting has a more earnest support been given to this valuable part of the machinery of the State Society, and in spite of the constant complaint we meet with from every quarter of the low standard in medical schools, the result at this meeting has been gratifying.

AFTERNOON SESSION—SECOND DAY.

Dr. Richard H. Lewis, of Raleigh, read a paper on some cases embraced in his specialty—ophthalmology. Case I *Capsulo-lenti-*

ular Cataract. Case II *Corneitis.* Case III. *Amblyopia.* Referred to the Committee on Publication.

Dr. Bahnson gave a verbal account of his plan of treating epiphora with a stylet of his own construction.

Dr. T. D. Haigh introduced the following resolution :

Resolved, That Section 2, Article IV, of the Constitution be altered, and the following substituted : There being objection it lays over under the rule until the session of 1879.

STATE BOARD OF HEALTH.

The Executive Committee of the Board of Health reported through their Secretary as follows :

REPORT OF THE SECRETARY AND TREASURER OF THE STATE BOARD OF HEALTH.

At the Salem meeting of the Medical Society of North Carolina the bill creating a State Board of Health was accepted by the Society, not because it was regarded of much advantage to us, but as the beginning of a good work which would some day redound to the honor and advantage of our commonwealth. I am satisfied that nothing but a sincere desire to make a beginning in the great work of sanitary reform, and to put the ball in motion, could have induced this body to have accepted such a great work with such trifling means.

As soon after my election as your Secretary, as was practicable, I sent written communications to every county in the State where the name of a physician could be obtained, except in Graham county. I set forth as clearly as possible that the object of the Board of Health was to organize a systematic plan of registration in every county, urging upon them to institute preliminary organization of County Medical Associations, which would then prepare them for establishing a County Board of Health. Some replies came, some replying that they had no acquaintance with the Constitution and By-Laws of our Society, and, therefore, could not act until informed. Others replied that there were not enough regular physicians in the county to organize. As there were no printed copies of the Constitution on hand, I had enough copies printed to supply every correspondent.

I received replies from forty counties. In some counties an attempt was made to organize, notices being sent out, and after one

or two meetings the effort failed. Not discouraged by this failure, I had some blanks printed which could be easily used for the purpose of collecting statistics, even in absence of an organization. I herewith present copies of these blanks:

The Pocket Record of Prevailing Diseases, was offered by private letter, and through the public press to any persons interested. In addition to this, I had blanks printed "For Physicians and Householders," and circulated wherever I could find a physician willing to give me his attention. The intention of this was to get information from any source, lay or medical, to enable us to trace the invasion of "Diseases Dangerous to Public Health."

A blank for the collation of "annual statistics by months," was issued to all Secretaries of Societies, and in many places where there were no such officers, copies were sent to such physicians as it was presumed could be roused to interest. Blank B. was intended to get statistics of the features of the soil, climate, drinking water, extent of forests, area of swamp and bog-land, rivers and the character of their margins, sewerage and drainage, character of public buildings, &c. It was hardly hoped that in one year, with almost no organization, that these reports could be made out correctly, but my design was to have them before the auxilliary societies to remind them of the scope of the enquiries of the State Board, at least.

In addition to this, in consideration of the frequency of drowning in the Cape Fear River principally, I had published for distribution among the ships and steamboats in the port of Wilmington, a card with the instructions for "Timely Aid for the Drowned and Suffocated." These are hung up conspicuously, as far as I have noticed, and have been well received. It is designed to distribute them still farther, when the addresses of those most interested can be obtained.

I am sorry to report that but few organizations have regularly reported, and that most of the material furnished me has been from individual sources. Had the reports obtained been unsatisfactory as to matter, I would have esteemed it a great gain to have had the attention of the profession of the entire State. In fact an extensive correspondence has been unremittingly maintained for twelve months. Hardly less than two hundred letters a month have been issued from my office, including circulars, since I undertook the task assigned me.

The results have been unimportant, but not discouraging. I could not be expected that statistics could be collected with much regularity without there was at least one paid officer in each county to do the clerical work, and keep the local correspondents up to their duty.

In corresponding with physicians I have suggested the following plan :

After organizing a County Medical Association, and County Board of Health, elect a Secretary with a view to his fitness as registrar and Superintendent of Health. Notify then the town or county authorities of their readiness to coöperate with these officials, in such duties as appertain to a Board of Health.

In New Hanover County, Committees were appointed as follows "On Epidemics and Endemics," "on Quarantine," "on Drainage and Water Supply," "on Statistics," and "on Sanitary Condition of Public Buildings." A like division of the work was recommended to other counties. In the County of New Hanover, there was already existing an officer in the pay of the city, and therefore it was thought well enough to sustain him in all his work as far as possible. Our organization had the effect of inducing the City Superintendent to keep the mortuary statistics, and at our suggestion to institute a course of inspection of private premises, with a view to mitigating nuisances and gaining such information as would be useful in future management of the hygienics of the city. As Dr. Wright, the Superintendent, to whom we refer, was the only paid Superintendent, so was he the only one who made regular reports. His inspection before referred to, extended to the examination of the relation of wells and cisterns to privies, and stables to dwellings, and the method of disposing of garbage adopted, &c. These examinations show that the rudiments of sanitary science have yet to be learned by the masses of the people.

I respectfully suggest as the result of my experience, that we should endeavor to get a bill through the Legislature which will secure for us the following features :

There should be a Board of Health in each county having a town of 300 inhabitants. This Board of Health should be composed of all the doctors eligible to membership in the County Society. The Chairman of the Board of County Commissioners and Mayor should be also, members of the Board of Health. The Secretary of the

County Society should also be Registrar of the Board and Superintendent of Health, with a salary from \$250.00 to \$600.00. For instance, a county with a town of 300 inhabitants should have a salary of \$250 ; of 500, \$300 ; of 1000, \$350 ; of 2000, \$400 ; of 3000, \$500 ; of 6000 and up to 15000 or more \$600.

The salaries of the Registrar and Superintendent to be paid by the county.

The duties of the Registrar and Superintendent should be clearly defined.

The State Board of Health should be composed of eight members chosen from the State Medical Society, and four appointed by the Governor. Three members to hold office for six years, three for five years, three for four years, and three for three years. From this number a President should be elected, and also a Secretary by the Board as thus constituted. The Medical Society of North Carolina should also have power to elect successors from their body as their terms expired. The expenses of the President and members should be paid when called upon to travel to the meeting of the Board.

The salary of the Secretary should be \$—— —and the allowance of the Board for stationary and other expenses, \$1000 to be paid out of the public treasury.

Reports from members of the auxiliary Boards should be made compulsory. Any one refusing to make a return of deaths, or the invasion of diseases dangerous to the public health after due notification by the County Secretary, should be subject to a fine of \$1.00 for each offense, the fine to be collected by the Sheriff upon writ, and to go to the county treasury, such sums to go to the payment of the salary of the Registrar of the county.

Reports should be made monthly to the local Boards and from them to the State Board, within ten days of the end of the preceding month. Copies should be retained by the local Secretary and by him consolidated, and his annual statement returned to the State Board of Health Secretary, as early as possible.

Among other duties, the County Registrar and Superintendent of Health should inspect weekly all the county public buildings, viz : school houses, jails, poor houses, work houses, and make a monthly written report of the diet and ventilation of the penal institutions, and the number of sick. He should also have charge

of the public vaccination, using vaccine furnished from the State Board of Health. It should have been mentioned in the proper place that it should be the duty of the Secretary to keep fresh virus always at his command, each county paying for it at the actual cost.

The County Registrar and Superintendent should be empowered to abate nuisances, which have been passed upon by the Committees having charge of the matter, and upon information of such action, the Sheriff be required to issue a process requiring an abatement of the nuisance by the party charged. But failing in a certain time to comply with this, the nuisance to be abated by the county or city, and the charges collected of the owner of the premises.

Failure to report to the local Secretaries, a case of disease dangerous to the public health, by any one practising medicine or by the nurse, subjects the delinquent to a fine of \$5.00 to be paid into the county treasury.

THOMAS F. WOOD, M. D.,
Secretary State Board of Health.

Wilmington, N. C., May 10th, 1878.

Drs. Satchwell, Thos. J. Moore, Chas. J. O'Hagan, and others expressed the hope that there was a brighter day in the future for the Board of Health. The public had to be educated to the necessity of it. Dr. Moore, especially, believed that when the public could be made to understand what a great and necessary work it was that we had undertaken, he thought our representatives in the Legislatures would give us aid. He had faith in the ultimate success of so disinterested a plan to improve the condition of the people.

As no action was taken to change the committee formerly serving to execute the duties of the Board, the inference is that they are continued.

Adjourned until 8½ o'clock, when the Society re-assembled at the Presbyterian Church to hear the address by the orator for the year, Dr. W. T. Ennett, of Pender County.

DR. ENNETT'S ORATION.

The subject of Dr. Ennett's oration, "Harvey as the True Discoverer of the Circulation of the Blood."

The subject was particularly appropriate because of the recent tercentenary of the birth-day of the great father of British phys-

iology. Just three hundred years ago there was no science of physiology. The medical profession was not as learned in physiology as a school girl of to-day. Darkness and empiricism stood where the light of the nineteenth century now stands and irradiates continents. Then the great Harvey was born. He described his personal appearance and habits; his early education; his studies in Padua; his final success after long weary years of doubt; but having unflinching enthusiasm, he evolved a certain principle from seeming chaos. His detractors were many. It was nothing new to decry Harvey, and to deny his claims. Great men had done it. In our country, Dr. Redman Cox had labored to disprove his claims; in Rome they had had the temerity and unfairness to erect a tablet to Cesalpinus as the real discoverer. Dr. Ennett analyzed these fallacies, and made it clear that the fame of the great physiologist would forever stand vindicated in spite of all.

His address was well received by an appreciative audience of citizens of Goldsborough, as well as of the profession.

MORNING SESSION—THIRD DAY.

Dr. W. C. Murphy offered a resolution that Dr. Ennett be thanked for his able and interesting oration, and that a copy of it be furnished for publication.

REPORT OF THE BOARD OF CENSORS.

Mr. President:—The Board of Censors has had referred to them, by the Raleigh Academy of Medicine, the action of that Academy, in regard to one of its own members, who is also a member of this Society.

Dr. R. H. Towles, of Raleigh, has been expelled from the Raleigh Academy of Medicine, for marrying a woman of the town, a copy of the license and of a return made by the officiating magistrate have been received by a Committee of the Academy.

This Board would respectfully recommend that Dr. R. H. Towles be expelled from this Society, for conduct unbecoming a gentleman, a physician and a member of this Society.

Respectfully submitted,

P. E. HINES, M. D.,

Chairman,

Dr. P. E. Hines' report from the Raleigh Academy of Medicine expelling Dr. R. H. Towles for conduct unbecoming a physician and gentleman was adopted.

DELEGATES TO THE VIRGINIA MEDICAL SOCIETY.

Report of delegates to other Societies was called for. Dr. O'Hagan represented this Society in the last meeting of the Virginia Medical Society assembled in Petersburg. It was presided over by Dr. James L. Cabell, Professor in the University of Virginia. He noticed that their method of proceeding was superior in many respects, and might be copied by us with advantage. All work was subordinate to scientific professional work. Dr. O'H. was received with that warm cordiality proverbial of the citizens of Virginia. He thought exchange of visits desirable and in many respects profitable.

A letter was received from Dr. Duncan N. Patterson, of Richmond County, deeply regretting his inability to attend this meeting. Dr. Patterson enclosed the Constitution and By-Laws of the Pee Dee Medical Association, which were approved.

NORTH CAROLINA MEDICAL JOURNAL.

Dr. O'Hagan wished to call the attention of the Society to the publication of our transactions for the coming year. Since our last meeting, two of our members, Drs. M. J. DeRosset and Thomas F. Wood has commenced the publication of the NORTH CAROLINA MEDICAL JOURNAL, with a courage which promised success. It was very sure that our medical literature was behind that of many States, and it was our duty, as it ought to be our pleasure to foster such a creditable work.

Dr. Hines agreed with Dr O'Hagan, and he thought the Society ought to give every encouragement to its own State Medical Journal. This Journal has already shown sufficient ability to predict for it a useful future. It could attain whatever position in medical literature that the Editors, by the aid of the profession, chose to make for it. Every doctor in North Carolina should take the Journal and interest his friends in it. He then offered the following resolution :

Resolved, That the Medical Society of North Carolina takes pleasure in recommending the North Carolina MEDICAL JOURNAL.

to the profession of the State, and that the Proceedings of this meeting be published in its columns. Carried.

Dr. Satchwell and Dr. C. T. Murphy also added words of commendation to that of the other gentlemen.

REPORT OF COMMITTEE ON CREDENTIALS.

The following gentleman have passed the examination of the State Board of Medical Examiners, and recommended for membership in the Society :

Drs. C. G. Bryan, Rich Square ; J. R. McLellan, Mooresville ; Richard K. Gregory, Greensborough ; W. W. Jones, Raleigh ; W. H. Cobb, Goldsborough ; Algernon M. Lee, Clinton ; D. Stuart Lyons, Paul B. Barringer, Charlotte ; E. H. Hornaday, Willow Green ; John A. Pollock, Kinston ; John H. Ficker, Henderson ; Peter McLean, Shoe Heel ; Richard J. Noble, Selma ; and J. Wellington Faison, Fulton.

The Chairman on Credentials beg leave to make the following special report in the case of Dr. R. K. Gregory: He confesses to a violation of the Code of Medical Ethics, by certain irregularities such as advertising in the public press, but now renounces all former acts in conflict therewith, and promises that in the future he will comply with the Code and in good faith will sign the Constitution and By-Laws and obey the same strictly. On these conditions we recommend him for membership. Report was approved and adopted.

REPORT OF COMMITTEE ON NOMINATIONS.

For President :

Dr. Charles Duffy, Jr., Newbern.

Vice-Presidents :

Dr. J. A. Gibson, Concord.

“ Willis Alston, Littleton.

“ James McKee, Raleigh.

“ A. A. Hill, Lexington.

Treasurer :

Dr. A. G. Carr, Durham.

Secretary :

Dr. L. J. Picôt, Littleton.

Orator :

Dr. W. W. Lane, Wilmington.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. W. C. McDuffie, Fayetteville.

“ W. A. B. Norcom, Edenton.

“ J. F. Miller, Goldsborough.

“ H. Otis Hyatt, Kinston.

“ R. B. Haywood, Raleigh.

“ W. A. Cheatam, Henderson.

“ G. A. Foote, Warrenton.

“ T. J. Moore Charlotte.

“ R. L. Payne, Lexington.

DELEGATES TO VIRGINIA MEDICAL SOCIETY.

Dr. Robert I. Hicks, Williamsboro.

“ W. R. Wilson Granville.

“ J. A. Tucker, Henderson.

“ George Graham, Raleigh.

“ W. T. Ennett, Pender.

“ W. T. Bahnson, Salem.

“ W. S. Lyon, Charlotte.

DELEGATES TO MEDICAL SOCIETY OF MARYLAND, BALTIMORE.

Dr. J. W. McKee, Raleigh.

“ D. N. Patterson, Richmond.

“ J. B. Hughes, Newbern.

“ W. J. Royster, Raleigh.

“ G. G. Thomas, Wilmington.

DELEGATES TO THE MEDICAL SOCIETY OF SOUTH CAROLINA.

Dr. R. F. Lewis, Lumberton.

“ R. H. Lewis, Raleigh.

“ J. McDonald, Washington.

“ F. W. Potter, Smithville.

“ J. B. Jones, Charlotte.

PUBLICATION COMMITTEE.

Dr. Thomas F. Wood, Wilmington.

“ C. J. O'Hagan, Greenville.

“ Wm. Geo. Thomas, Wilmington.

Dr. S. S. Satchwell, Pender.

“ W. J. H. Bellamy, Wilmington.

“ J. F. Miller, Goldsborough.

“ L. J. Picôt, Littleton.

Respectfully submitted,

G. A. FOOTE,

W. A. B. NORCOM,

J. J. SUMMERELL,

W. R. WILSON,

W. T. ENNETT,

R. H. SPEIGHT,

Committee.

Dr. A. Holmes, of Clinton, read a paper on Puerperal Eclampsia, which was referred to the Committee on Publication.

Dr. Robert I. Hicks read a paper on Puerperal Eclampsia which was referred to the Committee on Publication.

SECTIONS.

The following gentlemen were appointed Chairmen of the Sections :

Surgery and Anatomy.—Dr. Charles J. O'Hagan.

Obstetrics and Gynæcology.—Dr. H. Otis Hyatt.

Practice of Medicine.—Dr. W. A. B. Norcom.

Materia Medica and Therapeutics.—Dr. G. G. Smith.

Microscopy and Pathology.—Dr. G. G. Thomas.

UNLICENSED DOCTORS NOT ELLIGIBLE TO STATE APPOINTMENT.

Dr. Hines called attention of the Society to the fact, that a physician was filling the place of assistant in the Asylum for the Insane, who has never been before the Board of Medical Examiners. The question was warmly debated by Drs. Norcom, O'Hagan and others, and finally the following resolution, introduced by Dr. J. W. Jones, of Tarborough, prevailed.

Resolved, That the Medical Society of the State of North Carolina, disapproves of the appointment of medical officers in any public institution of the State, who have not passed a favorable examination before the Board of Medical Examiners.

Dr. R. L. Payne, President, delivered his valedictory on retiring from the chair, “ *Influences which Affect the Child Before Birth.*”

The law of heredity was first announced in the Mosaic law. The

law that "the sins of the father are visited upon the children to the third and fourth generations" went forth as an unalterable edict, and has been woven into the social fabric. A neglect of the laws of heredity was more fatal than "the pestilence that walks at noon-day." Syphilis, scrofula, epilepsy and other diseases were entailed upon our offspring by our sins. There was no way to escape the penalty which syphilis entailed. Its blight was sure to follow. So other diseases were unerringly transmitted.

The children of drunkards are apt to inherit the taste for stimulants, even more than this, idiocy and feeble minds so often are the inheritance from drunkenness.

No silly woman ever gave birth to a Jackson or a Lee. The stock must be vigorous to have vigorous scions.

It is equally a merciful provision that though the bad qualities descend, the good qualities are frequently the heritage of children. The doctor believed fully that the mental impression of the mother often marks the children *in utero*. He has seen enough in his experience to satisfy him, that "birth marks" result from exterior impressions. He cited a large number of cases to sustain his opinion, the reading of which entertained and instructed the audience.

Drs. O'Hagan and Summerell conducted the newly elected President (Dr. Charles Duffy, Jr.,) to the chair.

Dr. Duffy thanked the Society for the unexpected honor, which by their partiality he had been elected, and he promised to serve with fidelity, according to his ability.

EVENING SESSION—THIRD DAY.

Society called to order, Dr. Charles Duffy, Jr., President, in the chair.

Dr. Wood, of Wilmington, by permission of the President, placed on exhibition, by request of the manufacturers, samples of "*Trommer's Extract of Malt*," *Scott's Emulsion of Cod Liver Oil*;" some *Vest-Pocket Vial Cases* containing samples of *McKesson & Robbins'* gelatine coated pills; *Am Ende's Borated* and *Red Cross and Styptic Cotton*; "*Seven Springs Iron and Alum Mass.*"

Dr. Picöt exhibited a truss made by P. Werum, of Toledo, O., and showed its manner of application.

Time was allowed for their examination and distribution and the Society proceeded to business.

Dr. McDuffie reported a case of dislocation of the hip-joint downwards into the obturator foramen. The patient was a little girl, who walked about for several days after the accident, the parents thinking it was a stone-bruise on the heel. Reduction was effected by manipulation. The case was one of interest, from the fact that the hip dislocated spontaneously three times after its reduction.

COMMITTEE ON OBITUARIES.

Dr. J. W. Vick, Chairman of the Committee on Obituaries, made the following report :

To the Medical Society of North Carolina :

The undersigned respectfully submit the following report :

That they have examined the roll of membership and find the following members deceased, to-wit :

Drs. W. R. Sharpe, of Fulton; G. H. Macon, Littleton; C. G. Cox, Richlands; F. S. Alexander, Randalsburg; and O. P. Huston, Mount Olive.

Resolved, That in the death of the above members, the Society has sustained a loss of some of its most ardent supporters and most faithful guardians, and that the sympathies of the Society are hereby tendered to the bereaved families of the deceased.

J. W. VICK,
H. M. ALFORD,
W. DEBNAM,
F. A. GIBSON,

Committee.

The President announced the following gentlemen a Committee to examine the Secretary's book : Drs. Shaffner Vick and Debnam.

The Committee reported that they found the Secretary's books and papers neatly and properly kept, and commendable in every respect.

ELECTION OF THE NEW BOARD OF MEDICAL EXAMINERS.

The election for the Board of Medical Examiners resulted in the choice of the following gentlemen :

Dr. Thomas F. Wood—Examiner in Chemistry.

“ H. T. Bahnson—Secretary and Examiner in Physiology.

“ T. D. Haigh—Examiner in Obstetrics.

“ Geo. L. Kirby—Examiner in Anatomy.

• “ Peter E. Hines—Pres. and Examiner in Practice of Medicine.

Dr. Joseph Graham—Examiner in Surgery.

“ R. I. Hicks—Materia Medica and Therapeutics.

These gentlemen constitute the Board of Medical Examiners for the next six years. The assignment was made the night succeeding the election. The address of the Secretary is Salem.

Dr. Duffy made some remarks on the “Management of the Perineum” and reported a case of poisoning by Gelsemium.

Dr. C. Tate Murphy spoke at length on the value of *Gelsemium sempervirens* tincture, in treating malarial fever. He lived in a malarial district, and through a series of years he had carefully noted the effects of gelsemium. He found that relapses were less frequent after the use of this remedy than after the use of the cinchona alkaloids. [Many other points were brought out in this discussion which we do not mention because of insufficient notes. We hope Dr. M. will make his experience the subject of a contribution to the JOURNAL.]

After the business was transacted of the usual routine character, the Society adjourned to meet in Greensborough on the third Tuesday in May, 1879, at the hour designated by the local Committee of Arrangements.

L. JULIAN PICÔT, M. D.,

Goldsborough, May 16th, 1878.

Secretary.

ERRATA.

It is due to Dr. Octavius A. White to make the following corrections in his excellent article in our April Number. We are sorry its sense was obscured by errors of proof-reading.

Page 214, 8th line from top *derived* for *devised*.

“ “ 8th “ “ bottom *every* for *any*.

“ 216, 1st line, *recording* for *receding*.

“ “ 8th line from top, *until* for *while*.

“ “ 9th “ “ “ *even* for *seen*.

“ “ 11th “ “ “ *each* before *systole*.

“ “ 12th “ “ “ *unsustained* before *systole*.

“ “ 15th “ “ “ *which* after *movement*.

“ “ 18th “ “ “ *every* for *a*.

“ “ 19th “ “ “ *it* for *the*.

“ “ 22d “ “ “ *a* for *the*.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } Editors.

Number 6. Wilmington, June, 1878. Vol. 1.

ORIGINAL COMMUNICATIONS.

A CONTRIBUTION TO THE FLEXION TREATMENT OF ANEURISM.

By L. McLANE TIFFANY, M. D., Professor of Operat. Surgery,
University of Maryland, etc., etc.

The treatment of popliteal aneurism by flexion is recognized as so thoroughly proper at the present time, as scarcely to call for comment, yet, in the two following cases something may be found worthy of attention : In the first case, the beneficial results of strong flexion, lamination within the sac already being present; in the second case, good results appear to have followed the treatment, although the condition of the patient was hopeless. * * * white, single, aged 35 years, tall, slender, came under observation, September 19th, 1876, twelve years ago. * * * contracted a chancre, which was followed by roseola, alopecia, etc. Several years ago, he suffered from a pustular syphilide, which disappeared under appropriate treatment, since which time no manifestations.

September, 1876, he complained of pain in left ham, which had existed four or five days and was very lame. Referred the com-

mencement of his trouble to very violent exercise in a gymnasium one week previously. Pulse rather rapid, 100 per minute.

Left leg and ham swollen, the latter reddened and painful to touch; circumference of left thigh above patella, two inches greater than that of right at same point. Pulsation very apparent in left popliteal space, but no circumscribed tumor to be made out, owing to infiltration of subcutaneous tissue. Patient was directed to remain quiet on a lounge, light poultices were applied to relieve evident irritation of skin, and in view of syphilitic antecedents, potassic iodide, in gr. xv. doses, was given three times daily. During the following two weeks marked improvement in the inflammatory symptoms was seen, but the swelling persisted, decided aneurismal bruit was audible, while the foot and leg became œdematous.

Oct. 11th. Two horse-shoe tourniquets were applied over the course of the femoral artery, one just below Poupart's ligament; the other about the middle of the thigh, and by tightening or relaxing these according to indications, the blood current was interrupted without producing excoriation of skin, or any undue pressure at any one spot. It is found that pressure for two hours from one tourniquet is as much as can be borne without serious discomfort, and No. 2 is then tightened, No. 1 being relaxed.

Oct. 19th. Continuous pressure since last date, confinement to bed, iodide of potassium, gr. xxv, with gtt. xxv of iodide of iron, thrice daily. Pulse 100. Temperature 99°. Circumference of left thigh $1\frac{3}{4}$ inches greater than right.

Oct. 22. Pulse 115. Temperature 99.2°. Pulsation in tumor seems to be more easily arrested than formerly. No other change. Tincture digitalis, gtt. viij, thrice daily.

Nov. 1st. Little or no change in condition of limb. A tumor not clearly circumscribed can be made out in left ham at site of pulsation.

Nov. 13. Pulse 80. A tolerably firm tumor in left popliteal space; pulsation limited to tumor; œdema of leg much diminished. Digitalis omitted.

Nov. 25th. Pulse 100. Pulsation in tumor more marked. Digitalis resumed.

Dec. 5th, Pulsation very slight on relaxing the tourniquet.

Dec. 26th. Diminution in size of leg, pulsation very faint, tumor more firm.

Jan. 5th, 1877. Shortly after last note (Dec. 25th) and up to present time, the pressure of the tourniquet has given rise to tonic spasm of the extensor muscles of the affected thigh. The attacks are painless and last probably half a minute. As a result the tourniquet has not been applied for three days.

Jan 13th. Difference in circumference of knees one inch. Pulsation as before. Patient allowed to sit up. Irritability of muscles continues. Medicine stopped.

Feb. 18th. Tourniquet, combined with flexion at knee, has been tried during past week for two hours at a time. For the first four days no improvement resulted. Yesterday and to-day pulsation is less, and tumor harder.

The above notes are from the attending physician.

Feb. 19. Saw patient for first time. Pulse 120. Temperature 99°. Left ham one inch larger in circumference than right, contains a firm fusiform tumor, characterized by distensile pulsation, synchronous with pulse. Pressure on femoral in groin causes very decided diminution in size of tumor, with abolition of pulsation. Bruit faint.

Diagnosis.—Aneurism of popliteal partially filled with coagulum.

Treatment.—Firm flexion of leg on thigh. Tincture verat. virid. to reduce frequency of pulse. Magendie's solution hypodermically to abolish pain.

The limb was bandaged from toes to knee, and treatment as above. The pulse was reduced to 80 per minute, and kept there.

Feb. 20th. Flexion continues for 30 hours. Pulsation scarcely perceptible, tumor firm.

Feb. 22d. No pulsation. Tumor hard.

Feb. 23d. Very faint pulsation, which ceased after two hours flexion.

From this time all went well, no more pulsation or progressive diminution of tumor. Patient recovered completely. A certain amount of stiffness remained for some months, disappearing gradually.

An examination during the summer of 1877 showed enlargement of arteries on either side of patella, *compensative*.

The pressure by tourniquet in this case was continued during four months combined with rest and moderate diet, yet, when seen by me first, blood was passing through the dilated artery.

There was, however, a very decided deposit of clot within the sac, as instanced by firmness and diminished pulsation, and flexion of the limb was undertaken, with a view not so much of causing additional coagulation, as of dislodging a portion of fibrin already deposited, so as to plug the hole of the efferent vessel. The tumor would have been strongly manipulated (Fergusson) had it not been situated so deeply in a limb already hyperæsthetic and painful.

As the patient still preserves the limb, the exact method by which a cure was brought about, must remain in doubt.

It may be noted that the popliteal artery appeared to be obliterated as high as the opening in the adductor magnus.

The pain suffered by the patient was not great, but one injection of morphia (m vij. Magendie) being required, and this was administered two hours after the commencement of flexion. In addition to the gymnastic experience already referred to, the patient recalls the fact that two days before consulting a physician, while getting out of his bath, he felt a very acute pain and burning in the left knee and leg which passed off gradually. The patient is greatly addicted to tobacco, and at times has used liquors freely, though not to excess.

R. B., negro, very old and feeble, came under observation November 19th, 1877, suffering from pleurisy in right side. Under proper treatment the effusion disappeared. He continued weak, although able to move about the room, and it was apparent that he would not live long.

Jan. 11th, 1877, he called attention to his right knee, complaining of pain. Examination showed a strongly pulsating tumor filling the popliteal space with well marked aneurismal bruit. Pressure on the femoral in the groin caused partial subsidence of the tumor with entire abolition of pulsation and bruit. The upper portion of the swelling was distinctly circumscribed, the lower portion somewhat diffused and more persistent. The patient could give no history of commencement, or progress of his affection, being somewhat weak-minded. The anterior and posterior tibial arteries could be felt beating at the ankle. Case was watched until January 15th, and the swelling was found to increase decidedly. The diagnosis lay between a very vascular cancer of bone, and ruptured aneurism. Measurement around each knee showed the right circumference $1\frac{1}{2}$ inches larger than the left.

In the patient's condition amputation was not to be thought of, for he would have died on the table; so flexion was resorted to.

Jan. 15th. Flexion of leg on thigh to extent of arresting pulsation in tumor, and continued from 3 P. M. until 6 A. M. on the 16th—15 hours. The pulsation did not recur, the limb was enveloped in cotton and raised. A sensation of pins and needles was complained of with numbness of the extremity below the knee. The right leg remained somewhat colder than the left, for three or four days only; pulsation in the arteries about the ankle did not appear. The weight of the leg caused an excoriation of the skin on the most prominent part of the calf.

Three days after flexion, January 19th, the circumference of the right knee began to diminish rapidly. Patient died quietly, January 26th, apparently from inanition. *Post-mortem* twenty hours after death:—right lung everywhere adherent to chest-wall. Arteries markedly atheromatous throughout the whole body. The appearances usual in very advanced age were seen, but no special disease anywhere. The right popliteal artery was the seat of two aneurisms; the upper one filled with firm, partially decolorized clot; the lower one was ruptured on its lower and outer aspect, the rent extending longitudinally about one inch. Immediately outside of this aneurism was a false aneurism the size of an orange. The upper arterial dilatation was about one inch by two inches, fusiform, the lower not larger than a good sized walnut. The popliteal artery was filled by firm clot from the hole in the adductor magnus to the upper aneurism; it was also filled with clot between the two tumors, for an inch and a half, and finally, it was patent below the second aneurism. The walls of the lower aneurism were stiff from atheroma, and it was filled with clot moderately firm, not so stiff, however, as that filling the upper one; the contents of the false aneurism were of like quality; coagulation of the blood in the upper aneurism and adjacent artery evidently occurred at the time, and, as the result of flexion, consolidation in the lower dilatation and intervening vessel took place subsequently. It is a point worth noticing that gangrene of the extremity did not make its appearance, notwithstanding the age of the patient, plus the consolidated aneurism, by way of local complication. Verat. virid. was not given at the time of flexion, the pulse being slow and regular.

THREE CASES OF LITHOTOMY.

Occurring in the Practice of Drs. LOVE and MURPHY.

Reported by DR. P. L. MURPHY, Wilmington, N. C.

Lithiasis is not a very uncommon disease in Eastern North Carolina, but the cases are usually adults, who have nephritic colic and who generally pass the small calculi through the urethra. Many of these cases have come under our personal observation, and a greater number have been related to us by our professional brethren. Lithotomy is rarely performed in our part of the State and so far as I have been informed, lithotomy has never been attempted. It is not because our surgeons lack either the skill or the ability to perform these operations, the reason is simply this, they never have the cases.

In reporting these cases it is not pretended, of course, that they are rare, or that the treatment is new, but it is believed that they are of sufficient interest to be published.

During the summer of 1875, Edward, a healthy looking well-nourished quadroon about eight years old came under our notice with symptoms of stone in the bladder. He was sounded with a silver catheter—the only instrument at hand—the result was unsatisfactory.

Several months having elapsed, he was again sounded with a silver instrument, in the presence of Drs. Love and Thomas, Jr. At this examination the calculus was easily detected by all present.

The operation was postponed from time to time, until April 1876. Drs. Love, Wood, Thomas, Jr., West and Mr. John Harfield, a medical student, were present, and kindly gave valuable efficient aid. The lateral lithotomy was chosen. Chloroform was administered. The bladder was entered with little or no difficulty, but some trouble was experienced in seizing the stone with the forceps; considerable force was required for its extraction on account of its size. The calculus was a large kidney-shaped concretion of triple phosphates, weighing exactly four hundred and eighty grains, two inches long and one inch in diameter. Longitudinal section demonstrates that it was originally two stones, which, after their entrance into the bladder, had become united.

There was little hemorrhage, and it was thought necessary to apply only a wet dressing by means of the T bandage. Several hours after the operation, we visited the patient and found that considerable hemorrhage had occurred and was in continuance. The clot which had formed in the bladder and wound having been broken up and turned out, the bladder was well washed with cold water by means of a Davidson syringe. The patient being difficult of control and it being deemed inexpedient to again administer the anæsthetic, he was tied as for lithotomy. A parachute formed by attaching a piece of patent lint to a flexible female catheter was then passed into the wound, and distended by packing charpie around the catheter. Notwithstanding this, hemorrhage continued, when the apparatus was removed, and wound swabbed with Monsel's solution until the bleeding ceased when a new parachute, dipped in the same solution was passed into the wound and packed as before. There was no further trouble with the case, except a moderately severe attack of malarial fever, which yielded promptly to quinine. I have frequently observed in our malarial district that surgical cases of any character whatsoever, are sooner or later seized with miasmatic fever unless the proper prophylactic means be used. One of my professional friends lost a very interesting case on whom he had operated a week before for ruptured perineum, by malignant remittent fever. This digression is made in the hope that the younger members of the profession who may see this will profit thereby. Quinine should be used at all seasons of the year in injuries or operations of any gravity.

As intimated above, our little patient made a rapid and complete recovery.

He continued in good health for eight or nine months, except an attack or two of malarial fever which was controlled by the usual remedies. At the end of this time, that is to say, in December, 1876, he was again troubled with symptoms of stone. His mother objecting to another operation, the treatment ordered was merely palliative, which so well succeeded that nothing more was heard of the case for over a year. The latter part of January, 1878, he had chill and fever which was treated with blue mass and quinine. He did not have any further fever for a week. On or about the first of February he was again attacked with chill and fever, the thermometer ranging from 101° in the forenoon to 105° in the afternoon.

For the first time our attention was drawn to complaints of pain in the region of the right kidney and ureter, which was much increased by pressure. There was tenesmus of the bladder after each act of urination and at times, before the evacuation of that organ. The tongue was coated with brown fur; anorexia and thirst were present; urine scanty and high colored. The treatment resorted to was the usual one for malarial fever, viz: quinine in large and repeated doses, opiates to relieve pain, &c., &c. This treatment had the effect of reducing the temperature from 105° to 103°, the pain in the kidney and ureter ceased almost entirely, or, at least, enough to warrant the omission of the opiate; the appetite was better, the tongue began to clear—in short, so much was his condition improved that we had every reason to believe a favorable prognosis might be given. His condition remained thus for a week or ten days, when there was a further reduction of the temperature to 101° in the evening, 99° in the morning, but the appetite had become poor; there was much pain in urination; the urine for the first time contained pus; nausea and vomiting became prominent features. The only medicine now given was nitrohydrochloric acid and small doses of quinine, and laudanum when necessary. The most nourishing food was ordered, but he positively refused to take it, except in very small quantities. His mother informed me that he would almost always vomit after taking food, in fact, almost nothing would remain on the stomach. Pus in large quantities was passed by the urethra; the urine was scarcely perceptible—it was all pus to judge by the eye. The boy became rapidly emaciated. He would scream with pain when he was washed which was done several times a day, as there was incontinence. The only change made in the treatment was enemata of beef tea and milk. During this time the temperature again went up, ranging from 101° to 103°. Pain became so intolerable as to require morphia in large doses. Finally, he became semi-comatose and ceased to notice, but would reply intelligently to questions asked him. On the second day of coma he died.

Autopsy eight hours after death. The body was much emaciated. The left kidney was with difficulty torn from its capsule. It was much increased in size and weight, and had lost almost entirely its original shape. It weighed 4½ ozs., 4½ inches long, 3 broad by

about two inches thick—as large or larger than an adult kidney. In making a longitudinal section it was found to be studded with minute abscesses throughout, and in addition there was a large abscess the size of a small hen egg in the upper part of the organ, which had opened into the pelvis. The ureter was enlarged, thickened and suppurating. It readily admitted a 14 (English) sound. The right kidney was easily detached from its capsule; external appearance was normal, perhaps, a little paler than usual. A longitudinal section was made, and a large calculus $2\frac{1}{4}$ inches long, one inch wide at the middle, and $\frac{3}{4}$ of an inch thick. Its composition seemed to be chiefly the lithates on which there was a deposit of the phosphates. The stone is somewhat irregular in shape and weighs 40 grains. The kidney was very little more than a sac or a number of sacs (remnants of the calyces). The size of the kidney was about normal. It weighed $2\frac{1}{4}$ ozs. The pelvis and ureter as might have been expected were enormously distended. The lining membrane was thickened and suppurating, but not so freely as the left. The ureter would admit a man's little finger. The bladder has been stated contained a stone, it weighs 120 grains, is composed of the urates encrusted with a phosphatic deposit. The orifices of the ureters were much enlarged, so much so that they allowed a backward flow of the contents of the bladder, the right being the larger. The mucous membrane indicated cystitis.

On the 31st of July, 1877, a mulatto boy, aged 18 months, was brought to the office with symptoms of stone. He was sounded and calculus found. The next day was appointed for the operation. The only preparation was to order a dose of castor oil.

August 1st. Dr. Love, assisted by Drs. Wood, West, Mr. John Hartsfield, and the writer, proceeded to perform the lateral operation. No difficulty was met until the bladder was opened when some time was consumed in seizing and extracting the calculus. It proved to be a small one weighing about forty grains. There was no hemorrhage of consequence but the wound was filled with a parachute packing. The patient did well for the succeeding twenty-four hours, at the expiration of which time a sharp attack of remittent fever was ushered in and lasted for several days. After the fever subsided there was no further complication, the patient making a good and complete recovery, within three weeks from the time he was cut. His health has remained good up to this time.

J. S., son of Hebrew parents, about two years old, came under our supervision in the summer of 1876, with symptoms of stone. Although we felt well assured of the presence of a calculus, and so informed his parents, no examination by the sound was permitted until he had passed through the hands of several practitioners. He again came under our treatment a month or two thereafter. He was sounded and a stone detected by Dr. Love.

Lithotomy was advised as the proper operation, but his parents dreading the knife, and in hopes that the stone might be removed by lithority, which we refused to perform, carried him to New York. The diagnosis was there confirmed by several surgeons. Dr. Hutchinson, of Brooklyn, performed lithotomy on him twice. He wrote a very perspicacious and graphic letter describing the case, which by his permission, I re-publish with this report.

479 CLINTON AVENUE,

BROOKLYN, N. Y., Feb. 26, 1877.

DR. LOVE :—*Dear Sir* :—On the 10th of October, 1876, I performed median lithotomy on the son of Mr. S—. The stone broke into a number of fragments, but the greatest care was used to remove with forceps and by thoroughly washing out the bladder with tepid water. He made a good recovery from the operation, but the symptoms of stone persisted. I again sounded him but was not satisfied with the result. I then sent him to Dr. Van Buren, who sounded him and detected another stone or a fragment. I then sounded him again, and having detected the stone removed two fragments by bi-lateral lithotomy on December 11th, 1876. He recovered satisfactorily, but pain so far as I can ascertain, continued *during* micturition only, and when his bowels are moved. I sounded him again to-day, but with negative results. I may remark that after the second operation the bladder was carefully explored over its whole surface with the finger and also with the sound through the artificial opening, both by myself and my assistant, a gentleman of skill and experience.

* * * * *

I am very respectfully, yours,

J. C. HUTCHINSON.

In addition to the trouble mentioned by Dr. Hutchinson, he had spasm of the bladder. His general health was good. In June or

July of 1877, we sounded him, both by the natural passage with a steel sound and through a fistulous opening in the perineum with a silver probe. A stone was detected by both instruments. The fistula healed within two or three months. He remained under notice with no treatment until February, 1878, when Dr. Love performed lateral lithotomy. He experienced considerable difficulty in getting through the urethra on account of the thickening caused by cicatricial tissues, the result of the two preceding operations. He removed three phosphatic stones, one about the size of a pigeon's egg and the other two nearly as large as buck shots. The wound was treated as in the two other cases, that is, it was packed by means of the parachute. He made a good recovery with the exception of incontinence during the day. At night, or while he was asleep the urine ceased to trickle away. This was treated with belladonna and strychnia. Whether the medicine had any beneficial effect or not, may be doubted, but at all events he recovered entirely. Since the operation he has had no pain whatever. His health is perfect in every respect.

QUANTITATIVE ESTIMATION OF GLUCOSE.

When sugar is boiled with sulphate copper solution (of a known strength) the change occurring stood in the relation of one atom of the former to five atoms of cupric oxide. One atom of sugar was oxidized by, or reduced, five atoms of cupric oxide. Taking 63.4 as the atomic weight of copper and 180 as that of glucose, ($C_6H_{12}O_6$), 317 parts of copper would stand equivalent to 180 parts of glucose. Thus one part of copper corresponds to .5678 of glucose, and in calculating the amount of sugar in the blood (or urine) analyzed, the weight of copper deposited had only to be multiplied by .5678 to give its equivalent in glucose.—*Pavy's Croonian Lecture for 1878, Medical Examiner.*

DIPHTHERIA.

Read before the Medical Society of North Carolina at its Twenty

Fifth Annual meeting, Goldsborough, N. C., May 15th, 1878.

By CHARLES DUFFY, JR., of Newbern, N. C.

Mr. President :—Appointed at the last meeting of your Society to open the discussion on diphtheria, I hope I do not misapprehend the import of the word discussion; with my estimate of the word, I hope for a free interchange of thought and opinion, and I shall regard myself simply in the light of the first speaker on a subject, the importance of which demands that its discussion should be participated in by every member of the Society. The wide scope embraced by the whole of the subject, forbids anything like an attempt on my part at an exhaustive exposé. In the present unsettled condition of professional opinion with regard to its many important bearings, I shall be content if I succeed in eliciting your outspoken convictions, based on the careful study of the disease under actual observation.

That we may have an agreement as to what we call diphtheria, we will enquire, 1st. into its determining characteristics. Oertel says, "Distinctive as are the symptoms with which diphtheria appears in its clearly marked forms yet it is quite often difficult in individual cases, to decide if diphtheritic disease be present. In general, one is less likely to err in the diagnosis during an epidemic of the disease than in sporadic cases in which a definite distinction is often extraordinarily difficult. In the whole list of subjective symptoms, there is no single one which would be completely indicative and conclusive in the diagnosis, and just a little possible would it be to give a complete and well defined picture of a diphtheritic attack which would correctly represent every case at all times."—*Ziemssen's Cyc.*, Vol. 1, p. 660.

These words of the renowned German Professor, I am free to confess, have furnished me no little comfort and self satisfaction in many important dilemmas, and I am led by my experience to regard the man, who has had much dealing with diphtheria, fortu-

nate indeed, if he has not at some time vainly exerted himself with this diagnostic problem. Where this is sometimes the case when we have watched a patient from the inception of the disease to its end, how painful is our embarrassment to be confronted by such difficulties at the beginning of an attack, at which time according to the local origin theorists so much depends on the recognition of the disease; for, as they say, the infecting germs may be destroyed before they have had time to enter "the hungry mouths of the absorbents;" and when, more than all, the protective influence of the quarantine, with whatever hope it has to offer, may be seasonably enlisted in our efforts to arrest the progress of the disease.

Professor Flint relates a case, attended by himself and Professor Gilman, in which the disease was first supposed to be puerperal fever; also another case, under the care of Dr. Bogert, in which "the patient for twenty-four hours after the attack presented such an alarming degree of prostration, that death appeared to be averted only by the persistent and free use of stimulants. Pain and tenderness existed over the abdomen, and peritonitis was suspected. After 24 hours, however, the nature of the disease was declared by the occurrence of pseudo-membranous pharyngitis."—*Flint's Practice, 4th Ed., p. 1011.*

Moreover, Professor Flint thinks it probable that, "death may result from the overwhelming violence of the disease at its outset before the diagnostic features are developed."

All observers, since the time of Bretonneau, place a high diagnostic value on the presence of false membrane, which may occur on any of the mucous surfaces, or on any denuded parts of the skin which are exposed to the air. Its predilection seems to be for the mucous membrane of the mouth, nose, pharynx and larynx. The few replies to a circular letter, addressed to a number of physicians in different parts of the State, asking their views on this subject, seem all to accord to the appearance of this membrane, in the mouth or fauces, the proof positive of diphtheritic infection.

Granting the identity of croupous and diphtheritic inflammations, this corresponds with my own views, so much so, that when in the presence of a suspicious case, I am pressed for a positive opinion as to its nature, I am in the habit of stating whatever

suspicious I may have, and at the same time reserving my decision until time enough has elapsed for the exudation to have taken place. Notwithstanding this precaution, I can record many failures in diagnosis, of which the following will serve as a sample :

On the 18th of February, 1877, I visited, with Dr. Smallwood, of Newbern, Nellie Vass, who was sick with diphtheria. The other children (four in number, aged from one to eight years) had been sent out of the house to avoid the infection. The aunt, who had charge of them, thought she had seen "membrane" in the throat of little Bessie, who was accordingly brought home, and put into a room as distant as practicable from the one occupied by Nellie. She seemed to present only the symptoms of catarrhal fever, with a little engorgement of the cervical glands, no membrane being anywhere visible. After five days, no membrane having yet been seen, although we examined her throat two or three times every day, and there being no increase in severity of the subjective symptoms, we concluded it was not a case of diphtheria, and so expressed ourselves ; next day the membrane made its appearance, and the little girl died on the 5th of March. You may object, this was first only a case of common catarrh, and that diphtheria was contracted after her return home. I answer that the symptoms which seemed at last responsible for her death, viz : repugnance to food and vomiting, which were among the first subjective symptoms, never once disappeared, but continued most troublesome and annoying to the end, nor was the appearance of membrane attended by any marked exacerbation of the symptoms.

On the 8th of December, 1877, I visited a negro child (Johnson) 3 years old, who died the same evening with diphtheritic croup. On the 11th, a younger sister (15 months) living in the same room in which the older died, was taken sick with the group of subjective symptoms which make up the probable signs of diphtheria. I visited her daily from this time to the 13th, when, no membrane appearing, and all symptoms being ameliorated, I discontinued my visits, with instructions to the mother to report the child's condition daily until otherwise instructed. On the 14th, she brought me a strip of membrane $\frac{1}{4}$ of an inch wide by $1\frac{1}{2}$ inches long, which she said the child sneezed from its nose. It recovered.

Jan 31st, 1878, Freeman Manwell was taken violently ill with

the initiatory symptoms of diphtheria. On the second of February, he was free from fever, sick stomach, and vomiting, appetite returned, and no vestige of trouble remained except slight swelling of tonsils and cervical glands, which were not at all painful, and which, his mother said, was an invariable accompaniment of his frequent attacks of cold ; he continued apparently well till 4th of February, when he had exacerbation of symptoms, and membrane appeared on the 5th. This was a most tractable patient and offered not the slightest resistance to the examination of his throat, which was done time and again.

This pseudo-membrane, which I will notice again under another head, deserves a word here. It is unfortunate that, although we are obliged to wait for its appearance in order that our suspicions as to the nature of the disease may be either confirmed or corrected, it may present itself under a diversity of guises, and may thus leave us still perplexed. Passing over its more distinctive and characteristic forms, in which it is described as resembling dressed buck-skin or wash leather and the inside of bacon rind with clearly cut margins, it not unfrequently presents itself as a thin film, something like white or yellowish tissue paper ; again we find it in patches on the tonsil and palatine arch, differing, very slightly, if at all, in appearance from the mucous follicle ; in fact, it is often a matter of great difficulty, even with the aid of the subjective symptoms of either disease, to draw a dividing line between it and the pultaceous deposit of follicular pharyngitis. All these forms are still further liable to modifications by contact of applications and of vomited matter, by septic and gangrenous influences, so that in estimating the value of this characteristic sign we are obliged to admit that, beyond the well marked cases, there is a border land into which certitude does not extend. Here conjecture may be our only guide, but we owe it to ourselves and to our science, to hedge in this conjecture by every circumstance that can throw light on our difficulty, and to take care that it does not lead us into extravagance in our estimate of remedies employed, or in making up our percentage of deaths and recoveries.

Not the least interesting and important part of our subject is a consideration of its varieties. These, though they may range from cases so mild as to cause scarcely any appreciable constitutional dis-

turbance, to the profoundest septic and gangrenous forms, are so devoid of characteristic features and sharply defined limitations as to render a well drawn picture almost impossible. Yet that there are epidemics that differ one from another in many important particulars, seems to be a well ascertained fact, for how else can we account for the discrepancies of evidence in regard to its manner of propagation, its malignancy, and the estimation placed by various observers on the so-called remedies of the disease?

The catarrhal, the croupous, the septic and gangrenous forms of Oertel are not unfrequently witnessed in the same epidemic, and sometimes even the same patient will present each one of them in succession in the course of the disease; the same is true of the "mild," the "grave," and the "malignant," also, of the "pharyngeal," laryngeal" and "nasal." These then, the distinctive types of the disease, have reference more to individual variations, the explanation of which may, after further observation, be found in the constitution and environments of the patient; but beyond this, are there not variations in the epidemic nature of the disease, perhaps distinctive differences in the germs themselves that impress *epidemics* with a characteristic individuality? In my limited experience with diphtheria I can recall an epidemic, during the prevalence of which, upwards of sixty cases of the disease came under my care, in which there was only one death from septic poisoning; another peculiarity of this epidemic was the large percentage of the cases beginning in the larynx, and another, its infectiousness; having begun in a family, it seldom spared an individual of the susceptible age, and often manifested itself in the person of adults. In another epidemic, the first eleven cases died, nearly all of septicemia, when it seemed suddenly to lose its malignancy and nearly all afterwards attacked recovered. In this epidemic it was not unusual for one or more children, in the same house or room with others sick with the disease to escape; the membrane in these cases, usually, first began in the nose, and with one exception, no adult was attacked.

Dr. M. J. Moses, (*Virg. Med. Monthly*, Dec., 1875) speaking of differences in diphtheritic lesions, says, "there are two kinds or species of diphtheria, one originating in the system, created by the absorption of an element from external surroundings not in itself

a specific poison ; the other a local disease due to actual contagion of a specific disease-germ already humanized. That the point of manifestation of evolved diphtheria is the tonsil and velum, and that, when once evolved, the disease becomes local and capable of extension by continuity of tissue, the cell changes, occurring in catarrhal diseases of the air passages, favoring the growth and nutrition of bacteria and micrococci, proved by the microscope to be an element, not of the disease, but of the pseudo-membrane ; that from either the evolved or inoculated disease secondary absorption, or septic poisoning may result ; that this latter phase of the dis-

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 365 " 17th " " " *seem* for *seems*.
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 383 " last " *health* for death.
 386 " 33d " from top benefited.

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ETIOLOGY.

The practical question of paramount importance in the etiology of diphtheria seems to me to be, Is it capable of origination and propagation by direct contagion only, or may it be developed spontaneously, having its origin in a miasm generated without the body,

turbance, to the profoundest septic and gangrenous forms, are so devoid of characteristic features and sharply defined limitations as to render a well drawn picture almost impossible. Yet that there are epidemics that differ one from another in many important particulars, seems to be a well ascertained fact, for how else can we account for the discrepancies of evidence in regard to its manner of propagation, its malignancy, and the estimation placed by various observers on the so-called remedies of the disease?

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Here then is a theory, and though it may prove not to be a true one, we have in its favor Professor Huxley's testimony "that even a false theory is sometimes a necessary forerunner and preparation for a true one." In support of the dual or multiple nature of this disease we have, what seem to be, well authenticated cases of origination without the probability of importation or the spread of the disease from patient to patient, variable period of incubation, variable inception, progress, course and termination of epidemics, variability of infectious nature, and variability in death rate. To differentiate carefully the varieties, to study the sporadic cases with a view of ascertaining the conditions without, as well as within the body, that combine to originate the disease, to note the modifications to which it may be subjected in its passage through various constitutions, and that peculiar change of epidemic nature whereby the disease, most malignant at one period of its prevalence suddenly becomes so benign as scarcely to cause an unfavorable symptom, offers a field seemingly full of promise, to the careful observer; and if no more fruitful results were attained, he could, at least, do good service by clearing away some of the embarrassing confusion which has attached itself to the statistics of diphtheria, which at present show nothing but a compilation of contradictory evidence, from which no useful deductions can be drawn.

ETIOLOGY.

The practical question of paramount importance in the etiology of diphtheria seems to me to be, Is it capable of origination and propagation by direct contagion only, or may it be developed spontaneously, having its origin in a miasm generated without the body,

or does its infective principle partake of the nature both of a contagion and a miasm?

As this question applies with equal force to all the infectious diseases, it is difficult to separate its discussion from a brief consideration of the modern ideas of the causation of such diseases; which will bring us directly to the "germ theory of disease," or the doctrine of "*contagium animatum*," or "*contagium vivum*." This doctrine had its origin in the middle ages, and was very prominent in the sixteenth century. "Nevertheless, the living causes of diseases could not be found for a long time. The sixteenth century could not find them, nor could the seventeenth nor the eighteenth." The first scientific direction to enquiry into the development of higher organisms was given by Harvey's famous proposition "*omne vivum ex ovo*." Although inexact, as a general proposition, Virchow considers it in opposition to the old "*genatio aequivoca*," the greatest advance that has been made by science in this field. The force of this assertion of Virchow, can best be appreciated when we take into consideration the fact that up to this time it was a common belief that shell-fish, eels, serpents, rats and mice, caterpillars and other insects were the products of spontaneous generation. In our day it is hardly credible that it was once necessary to institute a series of experiments to prove that the maggots seen in decaying meats, were not spontaneously generated by the meat, but were the product of eggs deposited by flies usually noticed buzzing around and alighting on it. These experiments, beautiful on account of their simplicity and thoroughness, were made by Francesco Redi, physician to the Grand Dukes Ferdinand II, and Cosmo III, of Tuscany, and seem to have been the systematic beginning of the great combat for and against heterogenesis, or spontaneous generation. While it would be highly interesting, it would be out of place in a subject like mine to mark the varying fortunes of the struggle as it has continued from the beginning to the present time.

It is sufficient to say that the brightest intellects of our race have been, and are still engaged in it, and that for the elucidation of the subject every branch of scientific investigation has been interrogated. Immense difficulties still remain unsettled, yet many substantial points have been gained. "*Omne vivum ex ovo*" has been abandoned, and the contest is now being waged over "*omne vivum*

e vivo ;” and the most brilliant achievements of its advocates have been won on the field in which Ridi successfully experimented—putrefaction, and its kindred processes—decomposition, fermentation and zymosis.

Dr. Wm. Roberts, after a most beautiful comparison of the course of a contagious fever with the action of yeast in fermentation says, (*Brit. Med. Jour.*, Aug. 11, 1877). “I have already directed your attention to the analogy between the action of an organized ferment and a contagious fever. The analogy is probably real in so far, at least that it leads us to the inference that contagium, like a ferment, is something alive. We know of nothing in all our experience that exhibits the phenomena of growth and self-propagation except a thing possessed of life.” And again, “it is more than probable—looking to the general analogy between them—that all infective diseases conform, in some fashion, to one fundamental type. If septic bacteria are the cause of septicemia, if the spirilla are the cause of relapsing fever, if the bacillus anthracis is the cause of splenic fever, the inference is almost irresistible that other analagous organisms are the cause of other infective inflammations, and of other specific fevers.” Your familiarity with the labors of Burdon-Sanderson and Lister in septicemia ; of Obermeier and Hendenrich in relapsing fever ; of Davain, Bollinger, Tiegel, Klebs, and especially of Koch, in splenic fever, renders an analysis of this syllogism of Dr. Roberts unnecessary on my part ; yet with all the care and caution of its statement, I must reiterate the warning of Virchow, “prudence still counsels reserve.” “The proof is not yet all in.”

The exploits of our Dr. Salisbury and of Dr. Klein do not diminish the force of this warning.

In 1868 the micrococcus was discovered in the false membrane, blood and tissues of diphtheritic patients by Buhl, Hunter, and Oertel, (*Ziem. Cyc.*, Vol. 1, p. 588) and has been studied since with patience and industry by a host of observers, who, with singular unanimity, regard it as intimately associated with the causation of this disease. Many experiments have been made to prove that this was the actual diphtheritic germ. Inoculation of a healthy subject with diphtheritic matter, containing these germs producing the characteristic membrane, in which swarms of the same organisms were produced, seemed to furnish strong presump-

tive evidence in favor of the hypothesis. The seed, as it were, being sown in a bed suitable for its germination and growth, an abundant crop was produced. Eberth went a step beyond these experiments, and found that attempts to inoculate the cornea with membrane deprived of micrococci were unsuccessful in every instance. From these results he formulated his dictum: "without micrococci there can be no diphtheria."

In the parlance of the lawyers, were we to rest the case here, the evidence is almost conclusive that these organisms are the specific cause of diphtheria.

But the other side of the question presents the fact, according to Dr. J. Lewis Smith, (*Virg. Med. Monthly*, Feb., 1875) Dr. L. A. Stimson, (*Pop. Science Monthly*, Feb., 1875) and others, that micrococci are found in *non-diphtheritic*, as well as diphtheritic pharyngitis.

There is also an opinion, which seems to be gaining ground, that micrococci have no other causative relation to diphtheria, than that of mere *associates* of the infective principle, which has not yet been demonstrated. With this estimate of micrococci it is not difficult to understand that Eberth, in separating them from the diphtheritic exudations, preparatory for making his experiments, may have destroyed or removed this infective principle along with them, and, if so, of course the negative results would have followed even though the micrococci were left out of the question.

To put the matter beyond dispute it seems to be necessary to inoculate with germs, separated from their media by filtration, thoroughly washed with distilled water, as suggested by Dr. Charlton-Bastian. Now, could this process be accomplished without detriment to the organisms, it would seem an easy matter to fix their potency in the causation of the disease; and in the event of their successful inoculation, after being thus treated, there could be no dissenting voice as to their causative relation thereto. I am not aware that experiments fulfilling all these conditions have been made, and, until they have been, the question must rest "*sub judice*."*

*Some experiments, details of which were read before the *Académie des Sciences*, April, 1873, by M. Quinow, fulfilled very nearly most of these conditions. He placed putrifying blood in a bag made of a dialytic membrane, and immersed the whole in distilled water, which after a few hours was found to be filled with bacteria. Inoculation with the blood produced the usual results, but inoculation with the water caused no septic symptoms whatever. On the other hand the same blood, when subjected to various processes which removed or destroyed the bacteria retained its virulence (*Pop. Science Monthly*, February, 1875). As these experiments were not made with micrococci they are not conclusive as regards diphtheria.

Whatever may be our convictions in regard to the much disputed question, though we may be unwilling to accept bacteria, or any other recognized organism as causal elements, it is difficult to free our notions of the origin of diphtheria from a belief in its intimate association with, if it does not have its being in some kind of entity, whether it be living protoplasm or a chemical body. We cannot logically deal with its specific nature without entertaining some such proposition, which proposition can hardly be invalidated by the difficulty of its demonstration.

Fixing then the specific cause of disease in such entities, the inquiry presents itself, are they ever capable of "*de novo*" origination by any combination of unhygienic conditions within or without the body? Or must they have been born in every instance, as held by the advocates of the doctrine of "*Contagium vivum*," from a parent organism?

Without any disposition to ignore the brilliant achievements of Pasteur, Tyndall, Roberts and others of the *contagium vivum* school whose grounds against heterogenesis have thus far proved to be invincible, I will submit a few points held out by some of the strongest opponents of the "*contagium vivum*" doctrine in support of the "*de novo*" origin of germs. Dr. Bastian says (*Pop. Science Monthly Supplement*, February, 1878), "Although the blood and internal tissues of healthy animals and of man, are free from independent organisms and their germs, yet, such organisms will habitually show themselves after death, in the course of a few days, throughout all the organs of one of the lower animals, or, of man—even when life has been abruptly terminated during a state of health. It cannot be said, in explanation of this, that the organisms naturally present in the intestinal canal have been enabled to spread through the body—so as to reach its inmost recesses *after death*—since many of the organisms found are motionless, and others have mere to-and-fro movements of a non-progressive character. The blood again, has ceased to circulate, so that this fluid, germless during life, cannot after death be considered to act even as a carrier. If the organisms themselves cannot make their way through the tissues, and if no carrier exists, they must naturally have been born in or near the sites in which they are found."

Messrs. Lewis and Cunningham (*Fungus Diseases of India*, 1875,

p. 89) in some experiments on living animals with the view of ascertaining whether by interfering with the vascular supply of certain tissues and organs, they could cause organisms similar to those found in animals killed under chloroform, to present themselves. He found "that such was the result, and that a kidney, for example, when its artery was carefully ligatured without interfering with its position in the abdomen, would be found, after some hours, to contain precisely similar organisms, where as the other kidney whose circulation had not been interfered with, contained no trace of any vegetation whatever."

Professor Burdon-Sanderson says, (*Trans. Path. Society, London*, 1872), "If a few drops of previously boiled and cooled dilute solution of ammonia are injected underneath the skin of a guinea pig, a diffuse inflammation is produced, the exudation liquid of which is found, after twenty-four hours, to be charged with bacteria. Other chemical agents will lead to the same results, and always under conditions which preclude the possibility of the introduction of infecting matter from without." From these experiments Dr. Bastian concludes, "that an exclusive theory of 'contagion' as the only present cause of communicable diseases is not supported by experimental evidence."

With such evidence in favor of the "*de novo*" origin of germs we are warranted in the conclusion that there is a possibility of the origination of infective diseases without the necessity of the importation of their germs. In support of such a conclusion, in regard to diphtheria, I will introduce some evidence from a clinical standpoint; premising, however, that a better acquaintance with the life-history of such germs, may clear up the difficulties the following instances may put in the way of accepting the "*contagium vivum*" view of the nature of the disease.

In 1863, in an obscure district in Onslow County, diphtheria attacked the family of a man named Jones. All his children (three in number) died within fifteen days; there were no other cases in the neighborhood, and there was no evidence tending to show that it had been imported from any other locality. It seemed to originate and die out in this family. In June, 1876, two children of R. Berry, Newbern, died of diphtheria. With the exception of a case of membranous croup, January, 1876 (so called by the physicians

in attendance) there had been no case in town resembling diphtheria for more than two years.

The most careful inquiry failed to furnish any evidence that these cases originated from contagion.

The funeral of the children was largely attended, but no new case occurred till the 18th of the following November. On the 24th of August, 1877, Miss Brinson, aged 14, came to Newbern from the country, eleven miles southeast of town, to visit her relations. On the 25th, while playing on the river-shore she fell into the water, and neglected to change her wet clothes for some hours; on the 27th she had a chill and fever, accompanied by the ordinary symptoms of catarrh. On the 28th, membrane appeared in pharynx and a most violent diphtheria ensued; for some days she was in extreme peril but finally recovered. One of the children of her uncle, at whose house she was, contracted the disease on the 13th of Sept., and died on the 17th.

There had been no case of sore throat anywhere in the neighborhood of Miss Brinson's home in the country, and she made the journey in her father's boat on a wide river where it would seem impossible for her to have come in contact with diphtheritic germs. These were the only cases before or since that have occurred about the locality of her uncle's house in town. On the 8th of September, she was taken to her home where there were five children between the ages of three and eleven, not one of whom contracted the disease although no precautions were taken to guard them against contagion. On the 2d of September, 1877, a little daughter of Mr. Nutting, residing eight miles northwest from Newbern, took the disease and died on the 6th. It was not traceable to any other case, nor did any other of his six children, between the ages of three and twelve, contract the disease, although there was not even an attempt at isolation.

Dr. E. F. Smallwood, of Newbern, writes, "In 1856 I saw and attended three cases of a peculiar sore throat characterized by a membranous exudation, which cases were very severe, attended with difficult deglutition. In one of these cases croupal symptoms supervened. These cases occurred in children from five to ten years of age.

Scarlatina was prevailing in our midst at the time, but these pa-

tients had no eruption and no subsequent desquamation. In 1858 or 1859, I was called to visit a lady 35 or 36 years of age, who had been suffering from what she considered ulcerative sore throat for five or six days; deglutition was painful and difficult; when I saw her in the afternoon she could scarcely breathe; she had a croupy cough, and was evidently suffocating. Upon examining her throat I found it covered with a membranous exudation. She lived but a few hours after I saw her. These four cases I should now regard as cases of diphtheria." Dr. Smallwood says there were no cases before or after them, which could have caused or resulted from them, and he believes they originated *de novo*. Mr. Allen, a highly intelligent and observant gentleman, relates the occurrence of four cases of diphtheria in a family of negroes on his lot in 1863.

There were four children in the family, from 3 to 12 years, all of whom died; no other case resulted from these, and it was never known how they originated. It is remarkable that these first four cases and the first three related by Dr. Smallwood, occurred on the same premises, where the last fatal epidemic which recently visited our town, first made its appearance, there being seven years between the first and second outbreak, and thirteen years between the second and third. I do not wish, however, to leave the impression that the third outbreak occurred as mysteriously as the first and second. The evidence is pretty strong that the disease, in the last instance, was imported.

Dr. Wood, of Wilmington, writes, "among the first cases I ever heard about, was that of a child of Dr. Cleaveland, of Griffin, Ga. The doctor was stationed at the Marine Hospital where his little boy had the disease in July, 1863. At that time, I am informed there were no cases in Wilmington. The disease had been prevailing in Henry County, Ga., from which place the doctor had brought his family. Three months seem to have elapsed between the arrival of the little patient and his seizure. He was attacked on the 3d of July, and died on the 12th. No other cases originated from his, and this is the opinion of Dr. J. C. Walker, surgeon in charge of the hospital at the time. This is one of the earliest, if not the earliest case of the disease known in Wilmington. Of my own knowledge I have never seen a case of diphtheria traceable to contagion. I have examined every source of error in this opinion, and would be obliged to say, were there no well accredited statements to the con-

ary, that diphtheria is not contagious at all; but possibly I should modify this statement in view of the revelations now being made by Drs. Sanderson, Braidwood, Beale, Klein and others as to the phenomena of contagium, and say that it does not behave, if contagious, like the contagium of small-pox or scarlatina." And again, "I have seen solitary cases of the diphtheritic variety which stopped short, by dying out in the death of the subject, although there were abundant means of spreading it, and more individuals of the susceptible age within easy reach of the disease element. Many of my bad cases have been among the very poor; in houses with one room, with a limited supply of drinking and other utensils, with filth and filth everywhere abounding, with one common bed for sick and well, with lack of intelligence to carry out instructions as to the avoidance of the contact so dangerous in the well-known contagious diseases, and no way of escape, sooner or later, from a degree of contagion which would unerringly have propagated scarlatina, for instance; in such circumstances, I have seen one solitary case of diphtheria, all the other children escaping, but only to be attacked at the next outbreak of the disease in the following fall."

Dr. W. R. Wilson, of Townsville, writes: "While I cannot help, from my reading, believing the disease is propagated by contagion (in the strict meaning of the term) yet in none of my cases could I trace it to that causation. * * * * *

I recall now three cases, two adults and one child, all occurring under circumstances particularly favorable to propagation by contagion, and yet they were the only cases in the respective families. The first case, a man about 35 years of age, the father of six children, all crowded in one room, isolation impossible, in fact, one of the smallest children sleeping at night in the same bed with the father. Second case, a negro boy about 8 years old, one of eight children in one room, isolation impossible, using same bedding; and, contrary to my direction, the same spoon used in giving medicine was used by others in eating, (but one spoon in the family.) Third case, though with happier surroundings, a young lady, 18 years of age, was really ill with the disease before she suspected the trouble, or sent for me. During all this time she occupied the nursery of a large family of children, eating and sleeping with them. Now, in all these instances, I naturally feared the spread of the disease by contagion, yet, all three of these cases were solitary ones,

and all three occurred under circumstances most favorable to propagation. There was not any doubt as to diagnosis in these cases. In the three instances above related, 21 children were exposed to the disease and none took it."

Dr. John W. Booth, of Tally Ho, writes: "It does not originate by contagion; I never saw a case (of diphtheria) that I thought was probably communicated from one (subject) to another. So many single cases in diverse communities, in families of children, none of whom took the disease, but the one, while that could be traced neither to fomites nor personal contact. Willie B., aged years, had it three times in as many months, sleeping in the (same) room with his little sisters, neither of whom had the disease."

And so I might continue to multiply evidence of the same kind collected from various sources, but enough has been said, if not to establish the possibility of the spontaneous origin of diphtheria, to show that many careful observers, with ample opportunities, are strongly inclined to believe in such a possibility; and though they are met with the difficulty that a specific disease is of necessity obliged to have for its propagation a specific germ, equally as great a difficulty confronts those who hold the opinion that it is communicable by direct contagion only; and that is, that they not unfrequently encounter cases which the most rigid scrutiny fails to trace to the probability of importation. It seems to me there is no way out of these perplexities other than a thorough understanding of the life-history of the germs of the disease. Knowing the life-history of the germs of the pine tree, we are not surprised or bewildered at seeing a solitary plant of that genus springing up miles away from its parent source; and so of strange grasses that suddenly make their appearance about our farms, &c., &c. A thorough knowledge of the life-history of our most important grain, enables us to understand that, however essential it may be, something more than the perfect germ is necessary to the production of an abundant yield; essential conditions are, suitable soil properly prepared, the right degree of heat and moisture, and, with these favoring conditions for its health and growth, the plant must also escape such accidents as hail and wind storms, devastating insects, &c. All our most important successes in dealing with malarial diseases, yellow fever, cholera, &c., &c., depend on such knowledge as this.

Unfortunately our knowledge of this part of the subject under consideration is sadly deficient. We assume that there is a germ and that it is propagated by contagion; but the instant we begin to compare its behavior with that of other well known contagious diseases, a strong divergence confronts us. We find it has no well defined period of incubation, no distinct stages, no definite period of decline, and, more than all, that it is not self-protective. We know, and this comprises about all of our quantitative knowledge of the subject, that the favorite *bed* for its development and growth is in the persons of children between the ages of 9 months and 9 years; but even this statement may require qualification, for the disease known as "hog cholera," so terribly destructive to that animal, resembles it in many particulars. It seems to be independent of atmospheric conditions, or at least as regards temperature and humidity, season of the year, &c. Soil-soakage has recently been given a prominent place among the factors of diphtheria. Dr. Lewis J. Pilcher, (*Croup and Tracheotomy* in city of Brooklyn, *Proc. Med. Society, County of Kings, May, 1877*,) after reference to a map of the city wherein is shown the "croup districts" by small black squares, says, "every district presents soil conditions of an unfavorable character. This is a necessary corollary of the statement that they are occupied by the dwellings of the poor. Along the water front occupying ground rescued from the river or bay, upon the sites of marshes, now more or less obscured by the filling in process; in valleys that have been the site of water courses where drainage is imperfect—these are the districts that appear so black in the map which has been presented." Dr. Wood's conclusions,* based on observations of the course of the disease in Wilmington for the past few years, are in accord with those of Dr. Pilcher. Now, the little epidemic we have lately had in Newbern, probably due to importation of the disease, completely reversed this order, invading, in most instances, the most highly favored families, and the localities singularly free from the conditions mentioned by Dr. Pilcher. Oertel, while not giving prominence to malaric conditions, speaks emphatically of the baneful influences of crowded tenements, "living in damp dwellings and in rooms on level with the earth's surface."

*North Carolina Medical Journal, March, 1878, p. 179.

However difficult it may be to determine the conditions necessary to the life and growth of the diphtheritic germ, that such conditions do exist is a matter of the plainest inference. Analysis of the evidence adduced to show that diphtheria is capable of spontaneous (miasmatic) origination, on the one hand, and that it is due to direct contagion on the other hand, leads to the conclusion that its real place among the infectious diseases is that of the miasmatic-contagious. Regarded in the light of a miasmatic-contagious disease, wherein an essential condition is that the germ must be furnished by an infected person, the maturity and perfection of such germ cannot be accomplished unless it meet with the necessary conditions outside the body.* One of the strongest arguments in favor of the infective matter of diphtheria undergoing an important stage of its development outside the body—as a miasm—is that at a certain period in the career of a most virulent epidemic, it may suddenly lose its malignancy, and instead of—as may have been the rule—the majority of cases proving fatal, it may now be the exception for a case to die, and at length no more subjects are attacked. It cannot be said, as in the case of many contagious diseases, that it dies out for want of subjects to attack, for even though one attack protected from a subsequent one, which is not the case, it is rare for one-tenth of the susceptible population of any village or town to contract the disease during the prevalence of the same epidemic. In its development outside the body it resembles the ordinary ferments, on a grand scale, the atmosphere round about the infected point, may be compared to beerwort, in which the yeast germs have been sown; after a variable time activity begins in the fluid, soon reaches its acme of disturbance, and then declines. The food necessary for the nourishment and growth of the organisms has been exhausted; they starve, as it were, and die, leaving only a crop of germs behind them, which must wait for a renewal of the conditions on which their development depends, before they, in turn, can be converted into activity or virulence. Singularly illustrative of the truth of such a comparison

*In the present unsettled condition of the germ-theory of disease, this definition of Liebermeister might, with no great violence to scientific notions be modified as to include another class of miasmatic contagious diseases whose original germ might be generated *de novo*, outside the body, and afterwards becoming humanized spread in the manner at present accorded to the miasmatic contagious diseases.

are the following facts related by Dr. L. A. Hanks, of Pittsborough, N. C :

In the family of a man named Cook, diphtheria made its appearance on the 26th of September, 1876. In a few days five cases were developed of which one died.

“The disease here could not be traced to contagion, nor was there any thing in character of soil or drinking water, or condition of houses to account for its origin.” * * * *

Cook left the house and another family named Forshee, occupied it on December 20th, 1876. “There was no fumigation of any kind.” * * * On 6th of October, 1877, diphtheria again broke out in the house, and Forshee’s five children, aged respectively, 6, 10, 15, 18 and 21 years, all had the disease, and all died, except a girl of 15, who, after a prolonged and almost complete paralysis of voluntary muscles finally recovered. How suggestive of slumbering germs, is that period of immunity, enjoyed by Forshee’s family, dating from his entrance into the house to the occurrence of first case of disease,—nearly 10 months! How suggestive of the occurrence of a new supply of the conditions (food) for the germination and development of activity and virulence of the heretofore harmless germs, is the sudden and unaccountable outbreak of the disease, after so long a season of innocuousness, notwithstanding the strong probability that they were in contact with the subjects, afterwards infected, days and weeks and months!

To determine what these conditions are, is the whole of the work that remains yet to be done in this field; the proper treatment will follow as a necessary result of the completion of this all-important work, without which all attempt at curative treatment can be nothing better than guess work, which offers not much better hope of doing good than of doing harm.

The cases of simple pharyngitis, or follicular pharyngitis, that are usually prevalent during an epidemic of diphtheria, and concerning which, it is the habit of authors to warn us lest we mistake them for diphtheria, are worthy of our most careful study.

My own observation of these cases leads me forcibly to the conclusion that they are due to the infective principle of diphtheria, and that they are nothing less than modified cases of that disease. In support of such an opinion, and opposed to the notion that they are non-specific diseases, it is usual, on the one hand, for them to

observe a marked identity throughout their course, unless they merge into the graver malady, which they sometimes do so gradually as to resemble more one of the stages of that disease, than a distinct and separate disorder. They moreover bear a striking relation to diphtheria, numerically as well as to extent of territory invaded, whereas, on the other hand, the catarrhal cases ascribed to ordinary atmospheric vicissitudes, as well as epidemics of influenza, vary in every conceivable shape and form, and seem to have no causative relation to diphtheria. At the time of this writing (March, 1878,) we are in the midst of a wide-spreading epidemic of influenza at Newbern and vicinity, which has seemed literally to crowd out the epidemic of diphtheria which immediately preceded it, so distinct are these cases from those of the pharyngitis above referred to, that they cannot possibly be confounded with them.

As to whether diphtheria begins as a local affection of the throat, the system becoming secondarily affected by absorption of the poison, or whether it is primarily a constitutional affection, the throat symptoms being a local manifestation or expression of the same, observers do not agree. Oertel claims to have answered this question in favor of local origin, and he claims furthermore, that the general infection is kept up to the local one. (*Ziemssen's Cyc.*, Vol. 1, p. 577.) Dr. J. Lewis Smith, (*Am. Jour. of Med. Science*, October, 1877.) criticising the revival of this old doctrine of Bretonneau and Trousseau, says it has been productive of "an immense amount of harm" by the bias it has given to the treatment of the disease, and considers it "a great misfortune" that notions like those contained in Sanné's work could not have taken the place of those propagated by Oertel. The reconciliation of these opposing theories, on either side of which an immense amount of evidence for and against has been adduced, may possibly be found in the dual nature of the disease.

The identity or non-identity of true membranous croup and diphtheria, has been for many years a subject of frequent discussion. Pending the report of the Committee appointed to the Royal Med. and Chirurg. Society to investigate this question, it may not be without interest to glance hastily at the salient points of discussion. From a clinical stand-point the differentiation of the two diseases has rested mainly on, 1st, the origin:—diphtheria by contagion, croup by the ordinary causes of simple inflammation. 2d. That in laryn-

geal diphtheria several days of illness commonly precede the laryngeal symptoms. 3d. That albumen is commonly present in the urine in cases of diphtheria, and 4th, that nervous symptoms which follow diphtheria are not sequelæ of croup. Without reference to the statements of the host of observers for and against these propositions, my own limited experience has furnished evidence sufficient to convince me that these diagnostic differences do not hold. I have seen cases of so-called croup, followed in a few days in the same family by diphtheria, and the most of such cases as I have regarded as croup, have been sick with some apparently trifling disorder before the croupal symptoms declared themselves. Such cases have sometimes exhibited the presence of albumen in the urine. Sir Wm. Jenner and others have reported cases of croup followed by nervous symptoms. Dr. J. B. Hughes, of Newbern, a believer in the non-identity of the two diseases, says his late unfortunate experience has modified his views, and that he does not now believe he can distinguish laryngeal diphtheria from true croup; he has seen cases of croup and diphtheria in the same family at the same time. Dr. Pilcher's diagram, *loc. cit.*, showing deaths from diphtheria and croup from 1870 to 1876, gives for diphtheria in 1870—109 deaths, then followed a gradual increase till 1875, when they numbered 965, declining in 1876 to 810 deaths.

The croup wave shows a corresponding flow and ebb, in 1870 there were 210 deaths from croup, the wave steadily increasing reached in 1875, 424, and in 1876 down to 407. Dr. Young, of Oxford mentions two cases of membranous croup which he says were free from diphtheritic nature. "No diphtheria in neighborhood, no membrane in fauces," one recovered the other died. As an offset to these cases I can refer to numbers of solitary cases of unmistakable diphtheria (no others for miles around) and again to the second child of Johnson, referred to in another section of this report, in whose fauces no membrane at any time could be seen; nevertheless, on the subsidence of the disease a cast was sneezed out of the nose. The character of the membrane is said to differ in the two diseases, the diphtheritic membrane being of a fibrinous nature, and that of croup corpuscular.

Mr. Jabez Hogg, President of London Microscopic Society, lays stress on the dense and compact nature of diphtheritic membrane, and on its firm adherence to the subjacent membrane, but he does

not mention the fact that this difference in its adherence is due more to the nature of the mucous surface from which it is evolved than to differences in the nature of the false membranes themselves, it being an established fact that false membranes of whatever nature, do not adhere to the larynx and trachea so firmly as they do to the lips, tongue, pharynx, nasal fossa, vulva, &c. Apart from these facts it is significant that the histological characters given to diphtheritic membrane by Senator and Wagner* are assigned by Boldyrew and Nassiloff to croup, yet, all four of these observers agree in their opinions that the two diseases are distinct. The *Lancet* (Jan. 30, 1875) after reviewing these arguments, states: "Thus neither any one of these symptoms, nor any combination of them, can be relied on as affording grounds for separating the two diseases." Steiner (*Ziemssen's Cyc.* Vol. 4, p. 234) says: "Indeed, there are many good reasons for supposing that these two affections are only varieties and modifications of one and the same process, which, in consequence of special influences and collateral causes, as yet imperfectly understood, makes its appearance at one time as croup, at another as diphtheria; now in a sporadic form, now as a widespread epidemic, now as a primary, and now again as a secondary affection."

It is well, however, to bear in mind that the Health Boards of Glasgow, Dublin, Belfast, Brussels, Pesth, Vienna, Paris, Naples, Berlin, Breslau, Amsterdam, Copenhagen, St. Petersburg, Alexandria, Milan, as well as most of those in England and in this country, report diphtheria and croup under different heads. (*Am. Med. Bi-Weekly*, March 30, 1878.)

The questions of disinfection, fumigation and isolation involves a series of secondary questions, the difficulties of which, in the present state of our knowledge on the subject, well-nigh excludes them from discussion. We know what will destroy micrococci, but we are not sure they are the essential elements of the disease; and, granting that we find an agent that will destroy the veritable entity, known or unknown, we are not sure that it has not an unfailing source (atmospheric or telluric for instance) that will supply the living germs as fast as we may destroy them, and so neutralizes our efforts; we do not even know what are carriers of the contagion or

*Oertel represents Wagner as endeavoring "to prove that both were one and the same disease." *Ziemssen's Cyc.* Vol. 1, p. 577.

infective principle. If we isolate we do not know how long we must wait for the germs to die a natural death, and so render it safe to bring back the child to the place from whence we sent him. My observation of the influence of disinfection and fumigation can be told by the relation of a few facts. The last death from diphtheria at Mr. Allan's house was on the 5th of December, 1876. The house was vacated and the family did not return till the last week in January, 1877. The house had been thoroughly fumigated with sulphurous acid gas; had been cleaned by scouring and scraping walls and floors; bed clothes, wearing apparel and carpets had been destroyed; such of clothing, furniture and carpets as had been kept, were washed, then saturated with carbolic acid and alcohol, and packed up and afterward kept for days together in the sunshine and air; white-washing was freely done. The first case at the house of Mr. Vass (Mr. Allan's next-door neighbor) exhibited first symptoms of the disease on 12th of February, 1877, two months and seven days after the last death at Mr. Allan's house. This child visited Mr. Allan's soon after they returned. The next case at Mr. Vass' died on the 7th of March, 1877. His remaining three children, who had been away from home seven weeks returned on 6th of April. In the meantime, all the clothing, beds, carpets, &c., that were not destroyed, were packed in solution carbolic acid and alcohol, and afterwards spread out and kept for weeks in the air and sunshine. Walls and floors were saturated with chloride lime solution and while wet, sulphurous acid and chlorine gases were freely liberated in the rooms; so thoroughly were they fumigated that red strings hanging about the rooms were bleached by the action of the gases; the house was then well aired, paper pulled off and walls white-washed and painted. The third child was taken on 16th of April, ten days after her return; all the above mentioned cases died. These results are a sad commentary, on the efficacy of the means resorted to, to arrest the spread of the disease, and bear a remarkable contrast to the instances, referred to in another part of this paper, where no effort was made in this direction, and where numbers of children of the susceptible age were exposed in the most reckless manner and yet escaped the disease.

The prognosis of diphtheria, like all the other divisions of the subject, is involved in all manner of discrepancies of opinion. It

would be simply folly to attempt to make up a useful summary out of the variety of statement in this respect.

From the assertion of many physicians that they never lose a case of diphtheria, to that of others that almost all their cases die, every shade of variation occurs. The only rational conclusions that can be drawn from this confusion of statement is that there is every shade and variety of tendency, intensity and malignancy of the disease. Just here we might well emphasize the warning of Sir John Cormack that it is "not safe to found our treatment of diphtheria only upon what we ourselves may have seen and done. A practitioner may have seen in some particular locality, or in some epidemics, nothing but recoveries; * * * * he may be inclined to attribute the successful issue of his cases to the treatment which he pursued. Unless he be conversant with the experience of others, as with his own, he may slumber long under this delusion, but the time may come to him, as it has come to others, when in spite of his cherished remedies, local and general, he will see a large proportion of his cases perish." (*Brit. Med. Jour.*, August 29, 1874.) The milder forms of diphtheria, described by Oertel as the catarrhal, are, as a rule, not usually fraught with so much danger to the patient. The principal danger to be apprehended from it, is the possibility of its invading the larynx, thereby causing stenosis of that organ. A very large percentage of all cases, either beginning in or extending into the larynx are fatal, even when tracheotomy has been judiciously employed it does not seem too high an estimate to place the percentage of deaths at 75 per cent. The septic and gangrenous forms are scarcely less fatal. Professor J. Lewis Smith, (*Am. Jour. Med. Science*, October, 1877) in stating the causes of death in diphtheria, gives the first place to diphtheritic blood poisoning. 2d. Probable septic blood poisoning, produced by absorption from under surface of the decomposing pseudo-membrane. 3d. Obstructive laryngitis. 4th. Uremia. 5th. Sudden failure of the heart's action, either from anemia and general feebleness from granulo-fatty degeneration of the muscular fibres of the heart, which is liable to occur in all infectious diseases of a malignant type, or from ante-mortem heart clots. 6th. Suddenly developed passive congestion and œdema of the lungs, probably due to feebleness of the heart's action, or to paralysis of the respiratory muscles.

Symptoms of grave import in prognosis are persistent nausea and vomiting, disgust for food, extreme pallor, sanious discharges from the nose or profuse hemorrhages from the site of the membrane, albuminuria, difficult breathing. In such cases as tend to terminate in death by blood poisoning, the pulse is usually feeble, and very frequent, till a short time before death, when it not unfrequently declines from 130 or 140, to 60 or 80. If, however, the patient assumes the sitting posture it rapidly runs up, sometimes to 160, and then down again to 60 or 80 when recumbent position is resumed. In a number of cases where I had opportunity of observing this peculiarity of pulse, the patient usually died in from 3 to 12 hours. Sometime ago I had begun to regard such cases as those in which membrane first made its appearance in posterior nares as invariably fatal; but a more extended experience corrects this notion; several cases beginning in this way having since recovered; however, when the violence of the local lesion is concentrated in this cavity, the probability of recovery is diminished thereby. Finally, in the most desperate cases absence of nausea and vomiting, and the ability to ingest and retain plenty of nourishment, stimulants, &c., will encourage us to persevere in our efforts and to hope for a favorable termination of the disease.

A consideration of the effect of the diphtheritic poisoning on the various organs of the body, as also of the sequelæ of diphtheria would lead us far beyond the intended limits of this paper, which will now be brought to a close by a brief notice of the treatment of the disease.

In our lack of knowledge of the conditions on which diphtheria depends for its propagation, we are at a loss for specific rules for the prevention of the disease.

It is well, however, when practicable to send all children of the susceptible age away from infected districts, to attend to the enforcement of such hygienic measures as will best promote the sanitary vigor of those most liable to its ravages. Premises should be thoroughly drained and kept clean; apartments properly ventilated; frequent white-washing of fences and trees under pinning of houses, &c., should be done; drinking water should be carefully guarded against contamination; waste-pipes and sewers should be kept in order; we should impress upon parents and guardians the necessity of attending carefully to the death of children during the preva-

would be simply folly to attempt to make up a useful out of the variety of statement in this respect.

From the assertion of many physicians that they never of diphtheria, to that of others that almost all their cases shade of variation occurs. The only rational conclusions drawn from this confusion of statement is that there is every variety of tendency, intensity and malignancy of the disease here we might well emphasize the warning of Sir John that it is "not safe to found our treatment of diphtheria upon what we ourselves may have seen and done. A physician may have seen in some particular locality, or in some country nothing but recoveries; * * * * * he inclined to attribute the successful issue of his cases to the treatment which he pursued. Unless he be conversant with the results of others, as with his own, he may slumber long under a false impression, but the time may come to him, as it has come to others, in spite of his cherished remedies, local and general, he may find a large proportion of his cases perish." (*Brit. Med. Jour.* 29, 1874.) The milder forms of diphtheria, described by the catarrhal, are, as a rule, not usually fraught with so great a danger to the patient. The principal danger to be apprehended in it, is the possibility of its invading the larynx, thereby causing the necrosis of that organ. A very large percentage of all cases beginning in or extending into the larynx are fatal, and even if tracheotomy has been judiciously employed it does not diminish very high an estimate to place the percentage of deaths at 75 per cent. The septic and gangrenous forms are scarcely less fatal. J. Lewis Smith, (*Am. Jour. Med. Science*, October, 1877) in discussing the causes of death in diphtheria, gives the first place to direct blood poisoning. 2d. Probable septic blood poisoning, by absorption from under surface of the decomposing pseudomembrane. 3d. Obstructive laryngitis. 4th. Uremia. 5th. Failure of the heart's action, either from anemia and general weakness from granulo-fatty degeneration of the muscular fibres of the heart, which is liable to occur in all infectious diseases of the malignant type, or from ante-mortem heart clots. 6th. Developed passive congestion and œdema of the lungs, produced by feebleness of the heart's action, or to paralysis of the respiratory muscles.

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lence of an epidemic. If one should be sick from any cause, try to make him as well as soon as possible. Let him be taught, while there is yet time, to gargle his throat with salt and water; it may be a useful lesson to him, if it does not serve to harden the fauces and thereby diminish his susceptibility to the disease. Whiskey may also be given for its prophylactic influence, and it may be well at the same time to accustom him to submit quietly to the examination of his throat.

When the disease has declared itself I do not know anything that will surely modify its course. I am more and more disposed to rely on whiskey, or some other alcohol in large quantities, from the very beginning of the disease. Quinine, iron, and chlorate of potash would probably receive the endorsement of a larger number of physicians than any other medicines.

Quinine in large doses is almost universally employed for its antipyretic influence, and some claim for it the power of destroying bacteria; a good microscope in the hands of almost any observer will prove the fallacy of this belief, as the germs taken from the false membranes will be found to flourish and multiply in the solution, if free from excess of acids.

It cannot be denied, however, that quinine fulfils many important symptomatic indications of the disease, and sol. mur. tinct. iron and chlor. potash. The manner of their administration, quantity, &c., must be left to the discretion of the attending physician. The vast array of the so-called remedies, that have been paraded through the medical and secular prints, are hardly worthy of notice, not one of them, so far as I know, having fulfilled the promises made by its special advocate.

In the present state of our knowledge of the subject, the only rational plan to be adopted in the treatment of the disease is, barring such cases as tend to recovery without treatment, to study carefully the tendency to death in any given case, and direct our efforts to combat that peculiar tendency. For the diphtheritic and septic blood poisoning, failure of heart's action, and passive congestions, alcoholics, quinine, iron, ammonia, &c., would seem to be specially indicated. For uræmic symptoms our efforts should be, to promote the action of the kidneys, for this purpose, we might try digitalis, and, failing in this direction, we must invoke the vi-

action of the skin. For obstructive laryngitis we must try escharotics, preferably yellow sulphate of mercury, or alum or sulphate of copper—together with inhalations of lime-water, lactic acid, or acidulated solutions of pepsin, &c., by means of a hand bulb, or an atomizer, or, if this not at hand, by the inhalation of steam, generated in a cauldron or stew-pan, and conducted to the mouth of the patient through a funnel or tube. The careful feeding of the patient is a matter of prime importance; meat juice, and eggs, followed by a little pepsin, should be given to the full digestive capacity of the patient. The great difficulty which confronts us, here is the invincible disgust of the patient for solids of nutriment, not unfrequently the stomach rejects every thing we put into it, we may then try the bowel; but we often meet with the same difficulty with this organ; we have still left the skin, and the lungs for oxygen, ammonia, &c.: but the blood may refuse to carry nutriment and medicaments and our resources are at an end.

Local applications are useful chiefly for soothing and cleansing purposes, it is true they may exert some curative influence by their astringent and astrigent action, and it may be by their power of destroying the micrococci, and dissolving the membrane. Such powerful applications as the stronger acids, nitrate of silver, &c., are not generally employed by those physicians who have had most experience in the treatment of the disease; in fact they are usually condemned by them only to be condemned. Even such observers as are in favor of the local origin theory, frankly admit, that after the membrane has formed, even when in sight and in easy reach of application it is impossible to destroy such entities as are protected by superimposed layers of membrane, and that much harm may be done by the mechanical and chemical irritation of the tissues round the surfaces covered with membrane, and, therefore, promote rather than hinder its spread.

Dr. Ziemssen predicts (*Ziemssen's*, Vol. 1, 673) "that the unfavorable results which have been attained on all sides by cauterization, more energetically practised, must put a stop to this procedure, and if in its stead we should be obliged to resort to the opposite, namely expectant and symptomatic treatment."

It is astonishing, notwithstanding the knowledge of physicians of the impossibility of applying caustic to the entire surface liable

to be attacked by diphtheria, and that when applied to the thick hard membrane, which often covers such surfaces, it can have no manner of influence on the diseased tissues beneath it, that many insist on its power, to arrest the disease. Granted that it *can* be smeared over the entire surface required to be touched, and that there is no thick leathery membrane to intercept its curative influence, there is a protective coagulum formed by the contact of the caustic itself, which will shield the organisms contained in the little depressions on the surface, from any action of the medicine, and so leave them to continue their depredations unmolested in spite of attempts to destroy them.

If these objections to the use of nitrate of silver hold, when the disease is viewed from a local origin stand-point, how utterly absurd is the belief in its power to cure an affection of the throat which, as held by many, is simply a manifestation or expression of a previously existing constitutional disease?

The applications that seem to be best suited for most conditions of diphtheritic pharyngitis are tannin and glycerin \mathfrak{z} i. ad \mathfrak{z} i. sol. carbolic acid 20 to 30 grs. ad \mathfrak{z} i.; hydrate chloral solution 10 to 20 grs. \mathfrak{z} i; spts. turpentine; kerosene; sol. chlorate potash xx gr. ad \mathfrak{z} i., etc., applied with camel's brush or sprayed into the throat with atomizer; or, when the child can be made to gargle the throat, the may be diluted properly and used as gargles, or injected into mouth and throat with face held downwards. Mild solutions of carbolic acid may be injected into the nose; chlorine water, bromine in bromine potass. solution have been praised for their beneficial effects; and so hypo. sulphite of soda. Inhalations of steam as recommended by Oertel cannot but be beneficial, as well for its soothing effect on the inflammation, as for its softening influence on the membrane.

In the employment of these measures it is well to guard against reckless waste of the strength of the child, and to see that we do not contract the habit of believing that our little patient has been benefited, when, after having passed through the ordeal of an application he lies exhausted, panting and perspiring from his struggle to resist us.

Tracheotomy has not been successful in my hands; my cases, however, should not be allowed to vitiate the statistics of the operation as it was done in every instance as a last resort, when the opportu-

ty for its employment with the probability of benefit to the patient was lost; prejudice of parents against the operation was mainly the cause of delay. Against my five unsuccessful cases, I could place five operations done by my father without a single unsuccessful result. These, however, were done for foreign bodies in the trachea and larynx, and so are useless as statistics of operations done for membranous laryngitis, but valuable in an estimation of the part the operation, *per se* may have had in the death of the patients when freed from the influences of the disease, which necessitates its performance. M. Roger said (*Brit. Med. Jour.* May 9, 1874). "In the hospital, Sainte Eugenie * * * there are at least 500 cases (croup) annually * * * tracheotomy is performed on 200 to 300 subjects annually, most of whom die soon after the operation. In the face of such unfavorable results the question suggests itself whether the operation is justifiable. To this M. Roger replied, that even if we cannot save life we can always afford temporary relief. But tracheotomy to be successful in croup must be done early, that is, before the disease extends to the bronchial tubes, and before the patient is exhausted. * * * Tracheotomy, which was formerly but rarely practised, is now an every day operation, and the cures thus effected are estimated at twenty to twenty-five per cent."

Professor Spence, Surg. in ordinary to Queen in Scotland, in an address before the Brit. Med. Association (*Brit. Med. Jour.*, Aug. 14th, 1875) said, "I have now performed tracheotomy for simple and diphtheritic croup 103 times, and saved 34 out of that number, an average of about one life saved in three cases; and it must be remembered that at first I only operated as a last resort, and even yet I do not see my way to operate quite as early as some French surgeons seem to do. I think, however, there should be no delay when the character of the breathing, and the contracted state of the thoracic parietes, show that the lungs are not being distended with air. By operating early we avoid the risk of œdema, congestion of the lungs, and of the effects of non-oxygenized blood circulating in the brain."

He warns his young brethren against the discouraging results of operations, assuring them that though they may have 5 or 6 fatal cases in succession, if they persevere the average success will come.

In an article on tracheotomy in diphtheria and croup in the January, 1877 number monthly abstract *Med. Science*, copied from *Med. Times and Gazette*, November 26, 1876, an inquiry instituted to show there is "a fair proportion of recoveries after the operation." 89 cases of unmistakable croup and diphtheria were collected from "hospital and private practice, in which tracheotomy was performed; and out of these 36 recovered and 53 died, two patients out of every five operated upon recovered." Dr. Lewis S. Pilcher (croup and tracheotomy in city of Brooklyn, Trans. Med. Society, County of Kings, May, 1877,) collected 121, mostly unpublished operations, with 24 recoveries, 97 deaths. Dr. Pilcher remarks "It will be seen that in nearly every instance tracheotomy was not resorted to until the patient's condition had become desperate * * a demonstration that even in the last extremity the operation of tracheotomy holds out material hope of recovery." In his estimate of the proper place to be assigned to tracheotomy in the treatment of croup Dr. Pilcher proposes the following questions. To-wit:

- 1st. What occasions death in croup?
- 2d. What is the expectation of life in croup?
- 3d. How will tracheotomy prevent death in croup?
- 4th. Will tracheotomy in any case increase the danger of death in croup?
- 5th. What are the objections to tracheotomy?
- 6th. In what cases is tracheotomy indicated?
- 7th. In what cases is tracheotomy contra-indicated?
- 8th. At what time should tracheotomy be resorted to?

After an able and lengthy discussion of these questions in which the conclusions are always in favor of the operation, Dr. Pilcher says: "What other answers can there be, than that *justice to my patient, justice to myself, fidelity to the profession I represent, all unite in demanding that now, early, before the development of conditions which will make my interference but a forlorn hope, tracheotomy should be done.*"

On the other hand, there are many good men who regard the operation with disfavor, and some have even expressed the opinion that it deprives the sufferer of his only chance of recovery, declaring that the reported "successful cases are not membranous croup at all, but laryngitis or laryngo-tracheitis."

Among the difficulties in the way of the operation being done in many obscure country districts is the want of a properly fitting tube to be inserted after the more hazardous steps of the operation have been completed. I have myself been greatly embarrassed by this want, and in such an exigency* resorted to a plan which may be worthy of notice here. A short needle armed with silver wire, for the operation for vesico-vaginal fistula, held by forceps, was introduced just within the incision into the wind-pipe, and brought out through the integument (care being taken not to include an important vessel or nerve). Being cut the desired length the ends of the wire were brought together and twisted so as to form a loop or eyelet. A similar loop was made in the same manner in the opposite margin of the incision. To one of these loops the end of a small piece of elastic was attached and its free extremity carried round behind the neck and attached to the wire loop in the opposite margin of the incision. By a properly regulated tension of the elastic there was no difficulty in keeping the wound open, and by means of a syringe, to the nozzle of which was attached a piece of soft gum catheter; it was easy at any time to clear out any obstructing mucus, blood, etc., from the air passages. A Politzer's air bag or the bulb of a Davidson's syringe with the catheter attached would make a capital exhaustor for the same purpose.


A recently reported examination after death immediately following tracheotomy (by Dr. R. C. Brandeis, *Med. Press and Circular*, a notice of which is published in *N. C. MED. JOURNAL*, March 1878) demonstrated the possibility of death being hastened by the introduction of a hard rubber canula. In this instance the mucous membrane of the trachea was pushed before the point of the knife instead of being divided. The tube introduced between the wall of the trachea and its mucous membrane completely obstructed the wind pipe and death instantly followed. It has occurred to me that a somewhat similar accident might result from the pushing ahead of the canula, a fragment of false membrane, even when every precaution has been observed in making the incision. The

*An operation done by my brother, Dr. F. Duffy, Feb., 1877, in which the calibre of the wind-pipe was too small to admit the smallest tube we had.

cedure above described has at least the merit of being free from the possibility of either of these accidents.*

In closing this paper I would refer you to a most excellent report of the lamented Dr. John D. Jackson, in the March, 1874 number of the *Richmond and Louisville Medical Journal*, where may be found the details of two cases of tracheotomy conducted to a successful issue. As will appear from Dr. Jackson's report, the success of the operation depends in no small degree on the manner in which the after-treatment is conducted.

DR. BAHNSON'S STYLET.

In reporting Dr. Bahnson's remarks on the treatment of epiphora I overlooked inserting the little stylet he mentions, and give it here because of the  use it may be to those who follow his admirable methods in treating this troublesome disease.

CEREBRAL LOCALIZATION.

Brown-Séquard declares himself more adverse than ever to the theory of cerebral localization. The symptoms which are attributed to loss of function of the cerebral centres are due to distant irritation. According to him, it is no more logical to attribute a certain part of the brain than to place the sense of sight in the intestine because intestinal parasites can cause amaurosis.—*Progrès Médical*, April 13, 1878—*Clinic*.

Death from Methylene.—A recent death in London from this æsthetic agent only confirms what cannot be too often reiterated, that it is anesthesia that kills such patients, and not anything specifically poisonous in any one of the agents used. Deaths have resulted from every known anæsthetic.

In view of the fact that even a properly fitting canula cannot but be productive of harm by its irritating presence in an inflamed trachea, any method which has for its aim the diminution of such irritation, must be worthy of our consideration. I would welcome the contrivance of any plan that can usefully supplant the time-honored canula in its routine employment in the operation of tracheotomy.

SELECTED PAPERS.

THE ACTION OF MALARIA AND ITS INFLUENCE ON THE SPLEEN.

By JOHN SULLIVAN, M. D., M. R. C. P., London.

Amongst the many very valuable contributions to medical science published by the justly celebrated Professor Baccelli, of Rome none appears to me of more interest and importance than an essay read by him before the International Conference held in Geneva 1877, "On the Condition of the Spleen under Malaria, its Peculiar Venous Circulation, and its Special Function." The view of this special function of the spleen, as essential towards the process of digestion taken by Professor Baccelli although not exactly original, still as based on the influence of malaria is worthy of great consideration. Professor Baccelli directs our attention to two notable facts connected with the digestive function of the stomach.

At the commencement of an attack of marsh fever, we frequently observe that the patient has a voracious appetite, whereas when the action of malaria is repeated or continued, as in marsh cachexia there is loss of appetite and an obstinate dyspepsia. In the first case the engorged and swollen spleen is soft, and the hyperæmia disappears altogether. In the second case the congested condition of the spleen is permanent or varies but slightly. During the first few days the increase of appetite is conspicuous, and the dyspepsia which succeeds is ascribed by Baccelli, not to any increase of size in the neighboring organs, or to any pressure of the stomach impeding its movements, but rather to some chemical alteration in the process of digestion from an altered condition of the spleen.

Cachectic patients have a great aversion for nitrogenous albuminoid substances. If what is rejected be carefully examined by the lens, the fleshy fibres will be found unchanged, even although they may have existed in the stomach two or three days. Baccelli is of opinion that the spleen, with its peculiar gastro-splenic circulation has much to do with this perversion of taste, this longing after substances which do not require a great coöperation of the gastric juice in order to be utilized as food. He therefore arrives at the conclusion that the spleen, with its attendant short veins, is to the

cells of the pepsine glands what the system of the vena portæ is to the cells of the hepatic glands.

The large curvature of the stomach is connected to the spleen by five or six straight venous canals; these inter-communicate by means of minute little veins, disposed vertically and obliquely behind them. The absence of valves and of any coercive contrivance enables the blood to move on in a double inverse current, and to halt at a given moment either in the stomach, the spleen, or the intermediate vascular system. The veins which pass from the spleen to the stomach penetrate deeply, and the capillaries when injected unite in myriads, especially around the pepsine glands. All this special gastro-splenic venous circle opens into an angle formed by the splenic and left coronary vein. The vein thus formed by their junction passes downwards, then ascends, and, after having been joined by several branches, empties itself into the trunk of the vena portæ as it enters into the liver. The pepsine glands abound in that part of the stomach towards which the veins converge, and appear to be connected exclusively with the venous system.

Injections passed into the large and small venous tracts admirably illustrate the nature of this circle. Whenever an injection has been practised at the junction of the left coronary and anterior splenic vein, the venæ breves and their little branches were seen to be injected at one and the same time; and the fluid would have passed to the pyloric extremity of the stomach if it had not been prevented by a ligature. But if the injection was passed into one of the venæ breves it never took this course; it merely passed, if strong pressure were applied, into another vena brevis. Therefore, the venous blood passes from the spleen to the capillaries of the stomach; from the capillaries of the stomach to the left coronary vein; from the capillaries of the spleen to the anterior splenic vein; and from the anterior splenic and left coronary vein into the main trunk, which opens into the vena portæ.

When the capillaries are well injected they are seen to wind round the pepsine glands, exactly in the same way as the capillaries of the vena portæ wind round the clustered hepatic cells. You might fancy you were examining in the stomach, with the aid of the microscope—examining the exact preparation practised by the late Claude Bernard on the capillaries of the liver.

Carbon enters largely into the composition of pepsine; and this

must be derived from venous blood. It therefore, would be that one of the most important functions of the spleen is to send to these glands, through the *venæ breves*, the elements best adapted for the preparation of a material so essential towards the process of digestion.

Even being the case, we can understand how the various lesions of the spleen must give rise to various forms of dyspepsia. Although the absence of pepsine may not have an injurious effect on such alimentary substances as do not need to be dissolved by gastric juice, but merely to be submitted to the action of the pancreas in order to be fitted to enter the circulation. The study of the splenic circulation not only illustrates the function of the spleen, but also furnishes a proof of the existence, according to Baccelli, of a small abdominal circulation, the function of which is antagonistic to that of the small pulmonary circulation. If you dissect the stomach and disclose the pancreas in its entire extent, and lay it down, you will see the large vein which runs horizontally behind it; this receives numerous subsidiary branches, and passes directly from the left side of the spleen. This vein is about half the diameter of the vena cava, and forms by its position almost a right angle with the vertebral column. It lies behind the aorta, has no valves, and is liable to be compressed when the stomach is distended. Now, all these wise arrangements are necessary in order to protect the vein from pressure against the vertebral column. The large vein, having received some branches from the pancreas, runs on and forms part of the portal system. It then divides transversely the liver and the spleen as it passes over the aorta, and thus is completed the small abdominal circulation. The portal vein which is formed by the junction of the anterior splenic and superior mesenteric vein enters the liver. This portion of the circle is connected with that which unites the liver, the pancreas, and the spleen, and a complete venous circle is formed.

As Professor Baccelli is induced to teach that, in accordance with the laws of anatomy, physiology and chemistry, there exists a small abdominal circulation, the function of which appears to be to utilize all the hydrocarbon materials for the organs connected

in the same way as it is the function of the pulmonary circulation to eliminate superfluous hydrogen and carbon, in order to fix

the oxygen on which the quality of the blood depends, that it might be fitted for the office of combustion, or, to use the words of Baccelli, "of progressive oxidation of the elements on which rests the law of molecular changes and of the process of nutrition. If we examine the secretions special to the organs to which this venous circle is annexed, we find how large is the quantity of hydrocarbons they contain.

The pancreatic vein, as it passes between the liver and spleen, is exposed to pressure from its position between the vertebral column and the stomach when in a state of distension. But the spleen covers over one-third of the pancreas anteriorly, which then drops down, and is situated posteriorly, and thus a mechanical contrivance of great interest is obtained, to favor, and yet to protect from pressure. This contrivance is well ordained in order to supply these organs with a copious supply of blood. The spleen becomes more congested, the better to supply the glands of the stomach through the *venæ breves*.

The pancreas remains stationary, the numerous venous canals are unable to open into the large vein, and the liver being incapable of receiving any blood from it, there will naturally accumulate the blood which it receives from the vein formed by the junction of the left coronary and anterior splenic veins. And thus the different organs become well supplied with blood for the performance of their different functions. When these offices are completed, the pressure of the distended stomach upon the spleno-hepatic vein is diminished, and the circulation is equalized. This small abdominal circulation is intended to fix in the above organs all the hydrocarbonized materials required for their respective functions, just as the small thoracic circulation serves to eliminate certain chemical products, and fix the oxygen for the purification of the blood. In the liver, kidneys, and intestinal canal there is a depurative apparatus, formed as well from arteries as from veins, in which but a small proportion of hydrocarbons is formed, derived from venous blood only.

In this abdominal circle Baccelli does not include the mesenteric and superior vena cava, as they properly belong to the system of the vena portæ; therefore, starting from the spleen, this circle may be divided into an anterior section connecting the stomach, spleen,

liver, and a posterior connecting the spleen, pancreas, and

ch is an outline of what Professor Baccelli calls the "little
minal circulation," which I have seen demonstrated by him on
occasions on the dead body in the Hospital of Santo Espiritu
ome, and of his views respecting the function of the spleen
necessary towards the process of digestion. (A copy of the Pro-
f's diagram I append.) From these views we are led to con-



trunk of vena portæ, b, inferior vena cava; c, coronary vein; d, splenic-pancreatic,
at. vein; e, trunk formed by branch of anterior splenic and branch of left
nary veins; f, point of union of same; g, branch of anterior splenic; h,
ch of left anterior coronary; i, mesenteric vein (tied); k, vena brevis and
communicating branches; l, outline superior coronary vein; m, mouths of pan-
tic veins emptying into large vein.

that whatever cause may tend to impair the texture of the
n will interfere with its peculiar function, destined to supply
e pepsine glands the materials required for their special secre-

Now, whereas the spleen is specially involved in the morbid
ess of malarial fever, so is dyspepsia most pronounced when,
e continued and persistent influence of malaria, the texture
e spleen becomes damaged; and in the changes which it un-
oes by this action, consist some of the essential characters of
and ague. The reaction of the system against the infection
alaria generates a periodical non-inflammatory morbid process,
undamental character of which is intermittence. And as this
tial character of fever and ague has been defended and insisted
by Torti, Lancisi, and former Italian writers, so it is in the
nt day by the no less distinguished Professor Baccelli, of
e.

When the founders of medicine—Hippocrates, Celsus, Galenus,
—these profound interpreters of nature, defined marsh fever to
termittent, they must have been guided by their vast powers of
vation and experience. And if malarial fever be essentially

intermittent by its nature, it cannot be remittent or continued. Still, this intermittence may be obscured and masked, and the fever may take on the semblance of remittent or continued, but it is only sub-continued or pseudo-continued.

The paroxysms which mark intermittence may run one into another, one scarcely ending before another begins. Or, again, the sub-continued form may arise from an increase in the number of paroxysms in a given time. Or, again, an intermittent may acquire an apparent continuity by the extension of the paroxysms, so that if a paroxysm of fever be longer than usual the cold stage of the next access will interrupt or overtake the sweating stage of the preceding one. Thus intermittence may be interrupted or obscured by reason of the intensity or the degree of the poison, by some peculiarity in the individual constitution, or by the complication of some vital organ influenced by climate, locality, and season of the year.

The different modes and combinations in the administration of quinine in the hospitals in Rome depend on the nature of the malarial complication. Arsenic and camphor are considered to be capable of counteracting the paralyzed condition of the ganglionic nervous system; iron, as well as quinine, as useful for the restoration of the red corpuscles of the blood.

In some autumnal malarial fevers Professor Baccelli recommends to an acid solution of quinine the addition of ferri. pot. tart. and of arsenious acid. In the pneumonic form of malarial fever he prescribes quinine, with some mild preparation of antimony with camphor and henbane. But in the treatment of a disease which manifests itself under forms so varied and so treacherous, much will depend on the judgment and experience of the physician.

The British Islands are providentially free from the many pernicious forms of marsh fever. However, when we reflect how malarial in its worst form rages in many countries in Europe, in the East and West Indies, in the Northern and Southern States of America; how the records of the medical history of the late civil war in America demonstrate that there occurred in the army, from malarial diseases alone, near upon 1,500,000 cases, with more than 46,000 deaths, we cannot fail in arriving at the conclusion that a study of malarial disease, both as to its origin, its nature, and its treatment, should be regarded as a duty of the utmost importance.—*Medical Times and Gazette.*

CORRESPONDENCE.

OUR PARIS LETTER.

Vaccination in North Carolina during the War—Small-Pox in Paris and London—Gallard's Crusade against Alcohol—Nausea of Pregnancy—New use of the Oxalate of Cerium—Delayed Union after Fracture of the Upper Third of the Tibia—Dr. Peter on Temperature in Pleurisy—Brown-Séquard as the Successor of Bernard—The Great Exposition.

11 RUE NEUVE DES CAPUCINES,
PARIS, May 15th, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN:—*A propos* of the subject of vaccination, which you have discussed in a recent number of your Journal, I trust you will permit me to state what was accomplished in that regard during the war, in North Carolina. Whilst occupying the position of Surgeon-General, I found the people of the State seriously menaced with an epidemic of small-pox. The disease having been introduced by returning prisoners, developed itself contemporaneously in a number of different localities, causing a wide-spread panic and threatening a general devastation. Fortunately I had taken the precaution to send abroad for a supply of reliable vaccine virus—which arrived most opportunely—and, with the concurrence and coöperation of Gov. Vance, I organized in all the affected counties a rigid sanitary police, and a corps of public vaccinators. Under instructions from my office, the sick were thoroughly segregated and properly attended, whilst an almost universal vaccination was enforced. At the end of a few weeks, I had the gratification of finding that the disease had been entirely "stamped out" and that public tranquility was completely restored. I personally supervised the vaccination of several thousand persons; and the reports of my assistants showed that *more than seventy thousand* were vaccinated within the limits of the State. Much valuable information in regard to the whole subject of vaccination and re-vaccination, the concurrent introduction of other diseases, &c., &c., was collected and stored away for future use; but the unfortunate

incident of a capture by a band of raiders of all the stores and records belonging to my department; precluded the possibility of such an employment of these important facts as I had intended.

France enjoys a singular immunity from variola. It is rare to see a death noted from that disease in the mortuary returns of this city. Last year whilst London was ravaged, Paris almost entirely escaped. Although vaccination is rigidly enforced here, small-pox is so little feared, that as yet no separate hospitals for its treatment have been established; and in many instances, those affected with it are received in the ordinary wards.

I have not yet had an opportunity of trying the new treatment of small-pox, by large and repeated doses of quinine; but it is stated that this drug acts admirably in this regard—not alone modifying, but even aborting the disease.

Dr. Gallard, the distinguished physician of *La Pitié*, has entered upon a crusade against alcohol. He believes that it produces a form of gastritis which is peculiar and incurable. Under a prolonged use of alcoholic liquids, the mucous membrane of the stomach becomes softened and finally ulcerates; and, in his opinion, if the drunkard does not die from these causes, he succumbs to a slow but certain inanition. All this may be true, and yet my experience teaches me that climate and race have much to do in developing a taste for drink and in modifying its effects upon the human system. In England, and in certain parts of our own country, a taste for stimulants seems to be inherent, whilst its indulgence is attended with comparative immunity. Here, on the contrary, alcohol is not so much needed or desired, and no man can use it freely without being seriously injured by it. Statistics show that the ratio of disease and death from the use of alcoholic liquors is greater in France than in England and the United States. Even in connection with the practice of medicine this difference manifests itself. A Frenchman does not require and is incapable of sustaining as much stimulation as one of Anglo-Saxon descent. Alcoholic stimulants cannot be administered to foreigners with the same liberality and benefit in this country as in their own. The most unsuccessful practitioners with whom I have been brought in contact abroad, are the disciples of Todd and Bennett—are those who believe that brandy is a sovereign remedy for “all the ills that flesh is heir to.” Of course, I have only referred in this connec-

to alcoholic liquors proper, since the lighter wines are habitually drunk by every one here and seem to be a necessity of the human organism.

Space will not permit more than a passing allusion to the controversy which has been going on since the days of Duméril and Marquay in regard to the physiological action and therapeutical efficacy of alcohol. The observations of Binz, of Bonn, seem to have left no room for controversy in regard to the following propositions, viz :

1st. That alcohol when administered in certain quantities *lowers* temperature—controls combustion.

2d. That when administered in small and repeated doses, it not only increases the secretion of gastric juice and the movements of the stomach, but *elevates* the temperature—promotes combustion.

3d. That when pure, it is completely destroyed in the organism, and is a "food" in the sense of a substance which supplies the warmth and vital force necessary for the proper performance of the various functions of the body.

4th. That it prevents both waste and the ravages of disease, by increasing the reserve supply of fat in the body, stimulating the nerve-centres, and supplying a material which is at once susceptible of easy digestion and thorough disintegration, and capable of furnishing the condition precedent of nutrition, vital warmth and life to the organism.

5th. That, though an invaluable remedy in disease, it is unnecessary and even injurious in health, since when a sufficient transfer of nutritive material takes place from the food to the blood, the human body is capable of performing all of its legitimate functions without artificial stimulation.

In employing alcohol as an *anti-pyretic*, it is important to bear in mind that when introduced in considerable quantity into the stomach it impairs digestion by precipitating pepsin and inducing gastric irritation ; that for each degree of heat reduced there is an expenditure and loss of vital force and an interference with the normal functions of the blood corpuscles ; that it is capable of producing death directly by shock ; and that, when not disintegrated and consumed in the body, a strain is made upon the kidneys in its elimination which may add a serious complication to the malady already existing.

Attention having been called in this country to the treatment of the nausea of pregnancy, by the revival elsewhere of the old plan of cauterizing the os and cervix of the uterus, various remedies have recently been proposed by Continental physicians. Among the most popular, is that of throwing a current of ether-spray upon the epigastrium and along the corresponding track of the spine, as proposed by Lubalsky. He applies ether-spray in this way from three to five minutes, and repeats the operation every three or four hours, with the result of giving permanent relief in many instances. In very obstinate cases, he alternates the ether-spray with that of chloroform—which, according to his statements, acts most potently, not only in the nausea of pregnancy, but in asthma, whooping cough, chorea, and epilepsy. In a recent case which fell into my hands, and which had defied all the ordinary methods of treatment, I succeeded perfectly in calming the stomach, by applying the ice-bag to the spine three times daily, and giving every fourth hour two grains of oxalate of cerium, one-sixth of a grain of codeia and the fourth of a drop of the oil of cinnamon. For more than ten years I have been in the habit of cauterizing *the os and cervix* with nitrate of silver, and then applying half a grain of morphia upon a ball of cotton saturated in glycerine to them, but not with the invariable success which others seem now to claim for it. As an article of diet, I am in the habit of recommending raw-meat, prepared as a salad, and I find that it is readily retained when everything else is certainly rejected.

This reference to the oxalate of cerium reminds one of the new therapeutical use to which it has been applied. In a recent number of the *Practitioner*, Mr. Thomas Clark states that he has used this drug with apparently great advantage in cases of obstinate cough with shortness of breathing. After a few doses of five grains each the most obstinate cases of chronic cough were promptly relieved, the drug seemingly acting as a direct sedative. The oxalate of cerium was, as you know, first introduced by the late Sir James Simpson, in the year 1855, and has ever since enjoyed the confidence of the profession, both at home and abroad. Its value in epilepsy and chorea has been confidently asserted by several practitioners, and I have repeatedly employed it with benefit in certain forms of dyspepsia and chronic alcoholism. It is, however, in vomiting es-

ally in that obstinate form which accompanies pregnancy that enjoys its chief reputation.

Professor Duplay in a recent clinical lecture has referred to the frequency of delayed and imperfect union after fracture of the lower third of the tibia. He rejects the received doctrine that fractures above the entrance of the nutrient artery unite with less facility than those below it, because of the relations of the vessels which supply the bone, and explains the tardy and incomplete union of the fragments on an entirely opposite theory. According to his teachings, the upper end of the tibia is incomparably its most vascular part—possesses a greater number of vessels and has a larger amount of blood distributed to it than any other portion; and, hence, when a fracture occurs, such an amount of blood is shed out around and between the fragments as interferes with coagulation with the formation of a perfect callus. This explanation is undoubtedly the correct one, and cannot fail to commend itself to the profession.

Dr. Peter has just made an interesting report to the Academy of Medicine in regard to the temperature of pleurisy. He affirms that the temperature upon the diseased side is always notably elevated; that this elevation increases with the effusion and diminishes when the process has subsided; that the decrease of temperature always proceeds *pari passu* with the absorption of the effused fluid; that in cases of pleurisy without effusion the elevation of temperature on the affected side is always less than when an effusion is present, and the return to the normal temperature more rapid; and that the absolute elevation of local temperature on the diseased side is more considerable than the absolute elevation of temperature in the axilla, and precedes it in development. As Professor Peter is one of the most reliable and careful observers in France, his conclusions may be accepted with entire faith and regarded as furnishing a most valuable means of diagnosis in pleuritic affections.

Dr. Brown-Séquard, the distinguished physiologist whose identification with the American profession has reflected so much honor upon it, has been recommended by the Professors of the Medical Faculty of Paris as successor to Claude Bernard. Having been born on the island of Mauritius, he is not a French subject, and he will have to be naturalized before he can accept the professorship. The compliment of such a recommendation is, perhaps, the most dis-

inguished that could be paid to a medical man, and serves to show how liberal and discriminating a spirit really prevails in the world of science. Next to Bernard, Brown-Séquard has done most for the physiology of his times and well merits the reward which has been so handsomely tendered him by his confrères in this great metropolis of learning.

I am sure you will not consider it *infra dig.* on my part, to make the following translation from the *Lyon Médical*—a most serious journal. One of our ablest physicians was recently called upon to employ the vaginal speculum in the examination of a female patient. Having finished the exploration, he was about to remove the instrument, when she touched his shoulder and said very earnestly : “Excuse me, doctor, I have long suffered from pain in the stomach ; *while you are there*, please be so good as to tell me what is the matter.” The physician’s answer is not given, but I suspect it was accompanied by sundry expletives, since the occasion justified them and Frenchmen are proficient in their employment.

The great Exposition was formally opened on the 1st of May, but is as yet far from complete. The largest display in the American section is made perhaps, by Messrs. Tilden & Co., the well known druggists ; while Messrs. W. R. Warner & Co., have the most extensive assortment of sugar-coated pills that was ever seen in this country. So soon as things are fairly placed and arranged I will visit the exposition and make a detailed report of all that is to be found there of interest to medical men. The Medical Service of the Exposition is now definitely organized. A reception room has been fitted up for patients, and a *salon de lecture* opened for the benefit of visiting professional brethren, in which are to be found all the leading medical journals and most of the newspapers of this country. The Medical staff is composed of M. Ladriette de Lacharrière, chief physician, and of M. M. Audige, Benoit, Brenet, Kuhf, Lecoq, Sottas, Testaud, and Venet, assistant physicians ; while the Commissioner-General of the United States has selected me as the surgeon to the officers and soldiers on duty in his department, with the rank and title of Medical Attaché to the Commission.

There is one word of advice which I would give to all who contemplate a visit to Europe during the coming season, or, indeed, any time. It is this : in the event of sickness never to be delude

the mistake of sending for the physician recommended by the employés of hotels—especially the concierge or porter—unless perfectly willing to be fleeced and badly treated in the bargain. A most infamous system of commissions—a sort of amicable conspiracy to “take in” strangers and to divide the spoils—prevails on this side of the water; and it may be generally safely concluded that when a special recommendation of this kind is given it is for a consideration, and that it should inspire distrust. Of course, there are hotels which have no connection with this disreputable system and hotel-physicians of character and attainment; but as strangers are not in position to discriminate in this regard, they had better err on the side of safety, and follow the advice which I have given:

I trust your readers will remember to read this portion of my letter to such of their patients as may contemplate a visit to the position.

Very truly and respectfully yours,

EDWARD WARREN, (M.D.) M. D., C. M.

OUR NEW YORK LETTER.

Dr. Pilcher on Colles Fracture—Urethral Stricture and Dilating Urethrotomy—Obscure Abscess of the Liver, their Association with Hypochondria, &c.

46, WEST THIRTY-SIXTH STREET,

NEW YORK, June 4th, 1878.

The attendance at the Societies, notwithstanding the approach of warm weather has continued good, and the discussions have been of unusual interest. At a late meeting of the Academy, Dr. Pilcher, of Brooklyn, read an extremely able paper on Colles' Fracture of the Radius, probably constituting the most searching and critical inquiry into the history and mechanism of this accident that has ever been made.

The leverage which the carpal bones, as the hand is forcibly extended backwards, exert upon the lower epiphysis of the radius was

made perfectly clear not only by description and diagram, but actual experiments on forearms and hands brought for the purpose, and Colles' fracture was produced at pleasure in each case, by applying a forcible extension and pressure in the same manner in which they are applied in the accidents which ordinarily lead to their production. I shall not attempt to give even an outline of Dr. Pilcher's argument, but must refer your readers to the published paper, contenting myself with reciting briefly the practical influences which are to be drawn from it, with respect to treatment. It would seem that the method commonly employed for the reduction of this fracture are founded upon erroneous conceptions of the precise nature of the disturbance. Dr. Pilcher's method is to continue the extension of the hands backwards, when by pressing downward on the deformity which always presents on the back of the wrist the broken fragments are easily brought into perfect apposition. No splint is subsequently used, but only a broad adhesive strap and bandage, as a reproduction of the displacement is, from the nature of the parts, impossible, unless by design or renewed accident.

Some idea of the profound impression which this paper produced may be had when you learn that such a veteran as Dr. Frank Hamilton, in his enthusiasm over it, proposed to call the third fasciculus of the annular ligament (for which, hitherto little purpose had been found) *Pilcher's ligament*, as its probable function was clearly pointed out by this gentleman, and its entanglement in the styloid process of the ulna (which not infrequently occurs in Colles' fracture where the violence of the fall has been great) so graphically portrayed. The venerable Professor, Alfred C. Post, taking his cue from this frank, outspoken tribute of Dr. Hamilton, went even a step farther, and re-baptized the fracture—*Pilcher's fracture*.

Certain it is, that the treatment of this fracture to insure against deformity is now upon a safe basis, and we all must rejoice to be able to throw away our vast number of wrist-splints, so many of which, do much harm and none any good.

Dr. Pilcher's classical contribution will ensure the association of his name with this accident for all time to come.

The discussion of stricture and the relative merits of the different modes of treatment, whether by dilatation, divulsion or internal urethrotomy, will always ensure a large audience in this city.

the urethrologists are numerous and occupy no very friendly attitude towards each other. Dr. S. W. Gross, of Philadelphia, came by invitation to let us know what they are doing in this direction in the city of "Brotherly Love."

He extols internal urethrotomy as superior to dilatation or any other method for all strictures in the penile portion of the urethra; for deep-seated stricture in the perineal or prostatic portion he prefers divulsion. He acknowledges the influence of strictures of large calibre (slight contractions) in causing serious local and constitutional troubles. Does not think it necessary to incise the meatus in every case of contraction. Admits that nearly all strictures are located in the penile urethra, and says that many deep-seated *spasmodic* strictures, due to the existence of trouble located anteriorly, and treated as organic strictures by dilatation year after year, and that they would disappear immediately if the anterior trouble were only removed.

Dilatation only, never cures stricture, it may be conducted for many years but never results better than in giving a bougie to the patient to be used for the balance of his life.

Dr. Gouley put himself on record, with characteristic eloquence, against meatomy and internal urethrotomy. He always uses dilatation or divulsion. Thinks urethrotomy a crime, and that the incisors of urethrotomes ought to be killed. When we recall Dr. Gross's excellent instrument a sense of relief comes up to us that he has not yet expiated his own offence in that respect, for, this gentleman who has made external perineal urethrotomy what it is, and has given us the tunnelled sound, cannot be spared from the sphere in which he has made such a brilliant record.

Dr. Otis recited briefly his experience in over 600 urethrotomies performed with his dilating urethrotomer. Holding that the urethra is everywhere uniform in diameter throughout, he looks upon any enlargement or narrowing upon its calibre as constituting a morbid condition which ought to be removed. Condemned dilatation as useless, because it never cures; thinks divulsion may be applicable to some cases of deep-seated stricture when hemorrhage is feared. Has never had a death from hemorrhage, or indeed from any complication except extensive vesical or renal trouble and these are limited to two or three cases, which were operated on as a *dernier resort*. As to the use of his perineal tourniquet he regards the danger of

hemorrhage in any case as reduced to so minute a probability, scarcely to be taken into account. Has seen a great number of spasmodic strictures in the deep urethra disappear instantly upon the relief of a contracted meatus, or upon incising a stricture of large calibre located in the penile urethra. Many of these had been treated before coming under his observation, by dilatation, divulsion and cutting, under the belief that organic stricture existed. In this way the treatment of stricture had had much obliquity brought upon it. All cases of gleet depend upon the presence of a stricture at some point in the urethral course, which by offering an impediment to the flow of urine (it may be inappreciable) or by disturbing the muscular rhythm prevents the perfect expulsion of urine; and if even minute quantities be retained it acts as an irritant setting up local morbid action which may extend deep into some of the follicles and even into the submucous tissue with the effect of maintaining the discharge which invariably baffles all medication. Given a case of gleet the proper course to pursue first is to search for a stricture, which will *invariably* be found; it may be an apparently trivial one showing but a slight reduction (1-25th or 1-10th of an inch) below the normal calibre of the canal, too small indeed, to offer any noticeable obstruction to micturition, but quite enough to set up the train of symptoms which constitute *gleet*, and still more serious results.

No ordinary steel bougie or sound can discover these strictures of large calibre; resort must be had to Otis' olive-shaped bulb which locates them with the utmost accuracy. Of course the meatus must be incised if it is not equal to the urethral calibre, otherwise no instrument can be introduced which will be sufficiently large to render appreciable any encroachments upon the urethral canal. The removal of the stricture always cures the gleet.

Dr. E. L. Keyes, a gentleman widely and favorably known and co-author with Dr. Van Buren of a valuable treatise on the genital and urinary organs, also participated in the discussion, expressing his preference for dilatation and divulsion. He also deprecated interfering with strictures until they begin to give trouble. This doctrine was received with no favor, and your correspondent cannot do otherwise than regard it as pernicious. It should be as much the duty of the surgeon to prevent the formation of strictures as to cure them after they have formed. Indeed, the symptoms produced by

stricture may pass almost unobserved until it has proceeded far enough to constitute a very grave lesion. For instance the increase of the vis à tergo, which becomes necessary to force the flow of urine through a contracting stricture, may be and often is so gradual as not to attract attention; in the meantime the force applied may distend the ureters and pelves of the kidneys, to be followed by pyelitis, perhaps, or cystitis, or some associated affection of the prostate. I must regard the advice not to interfere with stricture until suffering demands it, as aiming a serious blow at prophylaxis in this direction.

Dr. Stein, likewise, participated in the discussion urging views from a German stand-point; but as urethrology has confessedly made the greatest advance through American surgeons, to give a summary of what Dr. S. said would scarcely further elucidate the subject. By the way there has come into my hands a pamphlet which is a reprint from a paper read by Dr. Stein, before one of our societies and subsequently published in 1872 in one of the medical periodicals of this city. It is upon the histology and physiology of the penis, and is beautifully and lucidly illustrated with lithographs from sections, which, a foot note informs us, were made and drawn by the author and his friend, Mr. John Busteed, of this city. I was amazed to find these cuts identical, line for line, letter for letter, with the beautiful illustrations accompanying Stillings' great and classical work on stricture, which had appeared about eighteen months before Dr. Stein's paper. We may congratulate ourselves that Stilling conceded the superiority of American work, in securing these cuts from this side of the water, but what shall we say for the failure of the great German author to give the proper credit where it was due. Some one must rise to explain.

At a meeting of the Neurological Society, June 3d, Dr. Wm. A. Hammond read an able and instructive paper on "Obscure Abscesses of the Liver, their association with Hypochondria, and their Treatment." The observations were made upon six cases with melancholia in all. Recently there has been shown to exist a more or less direct nerve communication between the liver and brain, following the course of the vertebral arteries, and through this Dr. H. suggests the possible influence of cerebral hyperæmia in the production of hepatic troubles, including abscess. An abscess once formed would of course react upon the brain, and tend to keep

up the hyperæmia, as expressed by melancholia, morbid impulses, dread of death, or insanity, &c. In all the cases the liver was aspirated, sometimes without any other suspicion of the presence of pus, except that furnished by the mental phenomena, and in all but one case the aspirating needle entered an abscess and evacuated 8 to 20 ounces of purulent matter, with the effect of complete relief from all the trouble. Exploring punctures of the liver are regarded as free from danger, or, as one gentleman expressed it, as safe as sticking pins in a pin-cushion, and the use of the aspirator will be far more common in the future. For fuller details in reference to hepatic abscess, and the mode of evacuating them your readers are referred to the New York Letter for March, in which a report is made of Dr. J. C. Davis' classical paper on that subject.

Artist Doctors.—At the late exhibition of the London Royal Art Academy, Sir Henry Thompson contributed "one of his pleasing little foreign scenes, *Chapel on the right of High Altar, St. Marks, Venice*;" and "Dr. Evershed contributed a horse's head under the title of "*A Study from Life*." From the surgery of the urethra to the artist's pallet, it would be well to shorten the distance in this country.

American Medical Association.—At the late meeting of this body Professor Theophilus Parvin was elected President, and Atlanta, Ga. the first Tuesday in May, 1879, as the place and time of meeting.

Test for Alcohol.—The Doctor: A very sensitive reagent for alcohol, and one that is very simple in its mode of application, has been found by M. Jacquemart. It is a solution of nitrate of mercury obtained by treating the metal with a little nitric acid of average concentration. The action is vigorous and rapid. The mercury is brought in part to the minimum of oxidation; and if a little ammonia be added to the mixture after the reaction, a dark precipitate is obtained, which is darker the more there is of alcohol in the product suspected. Methylic alcohols and similar liquids do not give a dark precipitate with ammonia.—*Med. News.*

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED
IN WILMINGTON, N. C.

M. J. DEROSSET, M. D., 46 West 36th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 10, Wilmington, N. C.

THE COMMERCIAL VALUE OF A BOARD OF HEALTH.

Enquiries at the office of the Secretary of the State Board of Health from the various foreign Consulates about the mortuary statistics, character of sanitary regulations in our sea-port towns, and other matters of such like important nature, have now to be answered in the vaguest sort of terms.

These enquiries are addressed, because of the solicitude these seagoing governments have for the health of men engaged in trade with our ports. An unfavorable report, of course, would damage the trade, and a vague report would create suspicion.

While the truth is, that our bill of mortality will compare most favorably with those of the cities trading with us, there is no bureau of statistics with sufficient means at its command, to produce a calculated authentic statement.

This is a great oversight in a State of growing commercial importance as North Carolina is. It is useless to establish Boards of

Immigration without something definite and authentic can be said of the health of our cities.

Even in our own State there is a tradition that yellow fever prevails in Wilmington every year, while the forthcoming report of the Superintendent of Health of this city will show that there has not been a single case of the disease known here, and that the death-rate is *very low*. But how is the world to know this? If a tradition of the yearly prevalence of a pest in our chief commercial town is to be credited for fifteen years after its disappearance, and amongst our own people, are we to expect these foreign countries trading with us to be better informed? And what will our agents of immigration base their statement of the healthfulness of our State upon, to convince and attract settlers?

But we need not pursue this argument further to convince thinking people that the State will save thousands of dollars by vitalizing her Board of Health. Gentlemen of the Legislature should not expect too much gratuitous aid from the medical profession of North Carolina. They are already overburdened with the care of the hundreds of indigent people the State cannot provide for, and it will be shameful if they allow them to struggle on without help to carry out that which in other States, has achieved such great results. Vitalize your already existing Board of Health or wipe it off the Statute Books!

MARYLAND MEDICAL JOURNAL.

We are very much pleased to see this handsome Journal, so much increased in size, in beauty of finish and excellence of material. Our friends, Drs. Manning and Ashby, deserve liberal support from the doctors of Maryland and the South generally, and their prosperous appearance means that they are established upon a steady foundation. This pluck on the part of the Editors should be met with an earnest response from Southern contributors and subscribers, and doubtless it will be.

REVIEWS AND BOOK NOTICES.

NINTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS, January, 1878, pp. 529. Boston: RAND, AVERY & Co., Printers to the Commonwealth.

The State of Massachusetts could have done no wiser or useful thing than in establishing a Board of Health, and appropriating sufficient means to make its influence felt in the civilized world. This is the ninth volume of their reports, and altogether they may be taken as the text-books of other similar Boards for many years to come. Our space will not permit as extended a notice of the volume before us as we would like to make.

The Table of Contents comprises the following heads: *General Report of the Board*, giving an account of the Brighton Abattoir—how it is managed, how garbage is disposed of, how offensive and harmful odors are overcome, and a hundred other useful hints. A summary of the investigation of the *Drainage, Sewerage, and the Pollution of Streams, and Danger from Color-Blindness*.

Dr. Jeffries discovered in Harvard University and the Institute of Technology that very nearly one in twenty of the students were affected with color-blindness. He thinks that one in *fifty*, much more probably one in *twenty*, of the community is color-blind. This defect is congenital. This disease (or defective faculty of perception we are inclined to believe it is) becomes important in those occupations in which color-danger signals are used. Therefore it is almost an imperative necessity to test engineers, signal officers, pilots and steamboat captains.

The subject of *Hydrophobia* received attention, we see, from the Massachusetts Legislature. Last year a law was passed requiring that a statement be issued with licenses to owners of dogs, each one having printed on it "a description of the disease known as hydrophobia."

Diphtheria was a matter of so much public interest that a public law directed the Board of Health to institute such sanitary measures as they deemed necessary for the public health, with reference to house-drainage, &c.

Scarlatina also received the same share of attention to prevent its spread. The expenses of the Board, not including the salaries of officers, was about \$5,000.

A table giving the equivalent value of the metric system is also appended.

An elaborate report of eighty pages is devoted to "*Drainage and Health ; Sewerage ; and Pollution of Streams.*" Accompanying his report is a map of the Drainage Area of Housatonic River, embracing 428 sq. miles, with descriptive text. Each town and village included in this area is specifically treated of, and the faults of drainage and other matters connected therewith plainly mentioned.

A report on *Cottage Hospitals* by Dr. J. F. A. Adams, of Pittsfield is especially worthy of the attention of the North Carolina public at this time. Public attention has for some time been directed to the lavish expenditures made in ornamental architecture, specially for insane asylums. The cottage plan has been successfully carried on in Europe, and is preferred. The advantages are many.

1st. The first outlay is small. 2d. The risks from fires are lessened. 3d. The risks by the spread of communicable diseases are lessened. 4th. In the case of the insane there is not an overcrowding of patients, or at least, there are not large crowds of insane to annoy those whose nervous system has not passed the stage of impressibility. The front elevation and working plans of a cottage hospital accompanies this paper, and it may not be amiss for the board of the Insane Asylum for the colored people to take this matter into consideration.

Professor Wm. Ripley Nichols, contributes a paper on the *Filtration of Potable Waters*, adding largely to the heretofore unsatisfactory state of our knowledge of the subject, and must be read to be appreciated.

The remaining articles are *Sanitation of Public Schools*, by D. V. Lincoln, M. D. ; *Scarlet Fever*, by A. H. Johnson, M. D. ; *Report on the Sanitary Condition of Cambridge*, by Edward R. Cogswell, M. D. ; *Health of Towns*. Under the latter head, Dr. A. S. Deane, suggests the following as prophylactic of diphtheria. "Drainage on a broad and scientific basis ; the prompt removal by a properly constituted force, of accumulated garbage and filth of every description, to a safe distance from densely inhabited quarters ; a vigorous enforcement of municipal ordinances bearing upon nuisances ; the cementing of privy vaults and cellars ; and a more extended and universal use of the city water"—(i. e., water fur-

nished from the water-works in preference to well water) because he adds in another place, in the localities where the outbreak of diphtheria was severest. "The source of water-supply has been in nearly every instance a well, which, in general, would be found to be shallow, and often situated so as to admit surface-water, and so close to vaults and cess-pools as to be liable to pollution."

The Massachusetts Board of Health is shedding lustre upon the civilization of the century by these valuable volumes, and our law makers would do well to acquaint themselves with them before they come face to face next winter with the question, "What shall be done for our own State Board of Health?"

THE BREATH, and the diseases which give it a fetid odor. With directions for treatment. By JOSEPH W. HOWE, M. D. 2d edition. 108 pp. D. Appleton & Co.

This little work fulfils the growing demand of the people to know more about themselves. It abounds in good advice to those enquiring the way to overcome the bodily infirmity of a bad-breath, but covers more ground by far than its title would indicate. Physicians can be of great service to their patients by bringing such books within their reach.

WHAT OUR GIRLS OUGHT TO KNOW. By MARY J. STUDLEY, M. J. M. L. Holbrook & Co. 1878. 13 and 15 Laight Street, New York.

The book before us is sure to reach the understanding and gain the sympathy of the readers for whom it is designed. No popular work has before ventured upon the ground of sexual physiology with half the delicacy and good taste. Surely our girls ought to know every word in this book, as a foundation for a more complete knowledge of themselves. Physicians always find that wives and mothers who are well instructed about themselves, escape much the misery which the ignorant have to endure, as a penalty of the ignorance. This book is sure to have a large circulation. Price by mail, \$1 25.

MEDICAL ANNOTATIONS.

SYPHILIS AMONG THE ABORIGINAL AMERICANS.

Professor Joseph Jones, in the *New Orleans Medical and Surgical Journal* for June has an interesting and convincing article on the existence of syphilis among the Aborigines, demonstrating it by the skeletons found in the ancient burial places in Georgia, Tennessee, Kentucky, Louisiana and Mississippi.

The marks of syphilis in the bones exhumed, have been traced by Dr. Jones from the valley of the Cumberland to the Gulf of Mexico. Some of the specimens were exhibited to the New Orleans Medical and Surgical Association.

The agencies which have, at various times, destroyed vast numbers of the aboriginal inhabitants of America, were *pestilence, natlazahuatl, malarial fever, small-pox, syphilis, ardent spirits, and lavery.*

The supposition had been advanced, that these bones presented merely "traces of periostitis," which were not due to the action of syphilitic poison, because "it is uncommon to find shin bones of adults belonging to races clad in skins, and with the lower extremities exposed, in which there is not more or less roughness or hyperostasis along the tibial shafts." So far from these evidences of the action of syphilis being mere "traces of periostitis, and constituting mere roughness or hyperostoses along the tibial shafts," the bones are in many instances thoroughly diseased, enlarged and thickened, with the medullary cavity completely obliterated by the effects of inflammatory action, and with the surfaces eroded in many places. These erosions resemble in all respects those caused by syphilis, and attended by ulceration of the skin and soft parts during life. Furthermore, the disease was not confined to the "tibial shafts;" bones of the cranium, the fibula, the ulna, the radius, the clavicle, the sternum, and the bones of the face exhibited unmistakable traces of *periostitis, osteitis, caries, sclerosis, and xostosis.*

The medullary membrane was evidently involved in many cases to an equal degree with the periosteum; the difference in the appearance of the products of the syphilitic disease being due most probably to the great quantity of fat and other loose tissues, among which the vessels of the medullary membrane run. * * * I observed in these bones, and especially in those of the cranium, the various forms of osseous ulceration which have been described by pathologists as characteristic of the action of syphilis, viz: rounded ulcerations with glazed surfaces, and marked hardening or eburnication of the bone beneath; tuberculated ulcerations, dependent not only on periosteal deposit, but upon chronic inflammation of the compact tissue itself; reticulated ulcerations, in which a net-

work of periosteal deposit had formed, and which had been perforated by the ulcers subsequently forming and assuming the annular type. That these diseases were due to mechanical injury, or to exposure to cold is evident from the fact that they were almost universally symmetrical in their manifestations. Thus, when one tibia was diseased, the other was similarly affected, both as to the position and nature of the disease. In like manner both fibulæ presented similar evidences of periostitis, ostitis, and exostitis; this was true also of the bones of the forearm (radius and ulna) and of the clavicle.

The symmetrical manifestation of the morbid process in the osseous system could only have resulted from the action of a poison introduced into the blood.

In answer to the question "Was syphilis indigenous to the Indian Race of North America, or was this disease communicated to the Aborigines by Europeans?" Dr. Jones believes the weight of the testimony is in favor of its American origin. Then with his characteristic learning, he gives us the logical sequence of history to prove it. Among other authors, John Lawson the first historian of North Carolina is quoted, and he thinks that Lawson was the first author (208 years after Columbus' discovery) to state that syphilis was presented to the North America Indians.

[We may state upon authority almost as good as Lawson, that one of the expeditions sent out under Mace, in 1602, to rescue the Raleigh colony, that the pinnace which made land forty leagues southward of Hatteras, loaded with "sarsephraze," the then popular remedy for the *lues venerea*.—EDITORS.]

"The diseased bones which I collected" says Dr. Jones "from the stone graves of Tennessee and Kentucky, are probably the most ancient syphilitic bones in the world." And he adds, "this discovery appears to be of great importance in the history of specific contagious diseases, in that it confirms the view held by some pathologists that syphilis originated in the Western hemisphere."

This article will add greatly to Professor Jones' already great celebrity, not only in clinical medicine and physiology, but as an archæologist.

BOOKS AND PERIODICALS RECEIVED.

Carbolic Acid Injections in the Treatment of Piles. By A. B. Cook, A. M., M. D. Professor of Surgery. Louisville Medical College.

The Vest-Pocket Anatomist. (Founded upon "Gray.") By C. Henri Leonard, A. M., M. D. Price 50 cents. This little work is a remembrancer for the use of students, and its popularity depends,

o doubt, upon the service it is to them in preparing for an examination.

Is Modern Education Exerting an Evil Influence on the Development of our Children? By A. W. Calhoun, M. D. Professor of the Dis. Eye and Ear. Atlanta Med. College. Reprinted from Atlanta Med. and Surg. Jour., 1878.

Is there a Proper Field for Battey's Operation? By Robt. Battey, I. D. Rome, Ga. 29 pp. From the author.

Investigations on the Effects of Prolonged Muscular Exercise on the Excretion of Urea, Uric Acid, Phosphoric Acid, Sulphuric Acid, and Chloride of Sodium. By Prof. Joseph Jones, M. D., New Orleans, La.

TO OUR READERS.

Advertisements are matters of business convenience to our readers, especially in the Southern States, where purchases of material are for the most part made directly from the larger cities. We therefore intend under this head to make such notices from time to time as we deem advantageous to all interested. We try to exclude improper matter from our pages, taking only such advertisements as we can reasonably endorse, and shall not hesitate to drop advertisers when we find we have been deceived.

Mr. Henry Kimpton, of London, offers especial inducements to book-buyers. The facilities of international money orders and regular and careful mails, makes it as easy to get books from London as from our own publishers. Mr. Kimpton's is head-quarters for books, old or new, and an inspection of his catalogues will be profitable. See advertisement.

Buffalo Lithia Water, According to the experience of many physicians, is a valuable adjunct to our means of cure. See advertisement.

University of Pennsylvania—This ancient institution of learning has recognized the necessity of raising the standard of medical education, and the host of Alumni in North Carolina will not fail to recognize this fact by a liberal support.

Messrs. Sharpe & Dohme, of Baltimore, present in their advertisement in this issue, a tempting list of pharmaceutical elegancies. The physicians enjoy great advantages in having skilled and educated purveyors such as this firm has shown themselves to be.

Our Advertisers at Goldsborough.—We were sorry so few of our friends took advantage of our offer to aid in the exhibition of their goods at the meeting of the State Medical Society, at Goldsborough. Many physicians came expressly to see the exhibit of surgical instruments, and make purchases, but no dealer was wise enough to take advantage of the occasion. We are sure that those who took our suggestion, will find they have aided the extension of their patronage.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D., }
THOMAS F. WOOD, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

CAPSULO-LENTICULAR CATARACT—CORNEITIS—AM- BLYOPIA.

Read before the Medical Society of North Carolina at its Twenty-Fifth Annual Meeting, Goldsborough, N. C., May 15th, 1878.

By RICHARD H. LEWIS, M. D., Raleigh, N. C.

The science of medicine being necessarily more or less empirical in its nature, a relation of our experience is always in order, and, I therefore, venture to report two or three cases which I hope, while they can claim but little in the way of novelty or importance, may nevertheless, not prove entirely wanting in interest.

CAPSULO-LENTICULAR CATARACT.—*Case 1.*

In September last I was consulted by Mrs. H., of Wake County, No. 58, for blindness.

She gave the usual history of cataract, occurring in old persons, stating that three years before she had first observed a dimness of sight in the right eye, which had gradually increased until at the time I saw her, she could not count fingers, and vision amounted

only to a good perception of light. The left eye had remained good up to three months before, when it had started on the downward path its fellow had previously taken, and apparently at a more rapid rate, as vision was not very much better than in the eye first attacked. She had never had any pain or other subjective symptoms and after a thorough examination in which the aid of artificial light and the ophthalmoscope were called in, the diagnosis of uncomplicated senile cataract, fully matured in the right eye, and not quite so in the left, was made.

It will be observed that I mention the employment of the ophthalmoscope in making the diagnosis, and I call attention to it because mistakes are sometimes made from its neglect, notwithstanding the fact, that the diagnosis of cataract is, as a general thing, so simple that as it were "he who runs may read." In very old persons particularly, owing to the sclerosis of the lens from age, there is always a more or less greyish reflex from the pupil, that in a superficial examination is often very deceptive. I once saw a case myself, in which a talented and accomplished physician had made just such a mistake, and I understood, had come very near operating but had given it out on account of the feebleness of the patient. I am sure if he had used the ophthalmoscope, he could not have made it, for an ability to see clearly the details of the fundus settles definitely in the negative, of course, the question of the existence of an obstruction to the entrance to light and consequently of cataract.

As the only means of restoring sight, an operation on the right eye was advised and the patient consenting, it was set for the next day. The only preparation for it was a caution to abstain from breakfast for the sake of avoiding, if possible, the vomiting which is so apt to follow the administration of ether, and which not infrequently endangers the success of the operation.

In due course the patient having been completely anæsthetized with ether, the ordinary modified linear extraction of Von Graefe, which is now almost universally employed in cases of senile cataract was performed; and for the most part it was almost entirely commonplace. The incision, iridectomy, laceration of the capsule and evacuation of the lens were effected without difficulty or accident; but after the removal of the lens the capsule was found to be opaque, and the obstruction to vision still remained. In, com-

Comparatively speaking, few cases does the capsule partake of the opacity of the lens, the removal of which is usually all that is required; but in this case, unfortunately it did, and as it offered an effectual barrier to the entrance of light it had, of course, to be removed as much as I regretted the necessity.

So seizing it with a pair of fine forceps and withdrawing it as promptly as possible through the incision, I snipped off the larger portion of it with scissors.

The remainder immediately rolled up to one side behind the iris leaving the pupil black and clear. The traction upon the capsule capturing the suspensory ligament of the lens and the hyaloid membrane, there was (as was expected) a loss of vitreous humor; but luckily not enough to jeopardize the eye. Having cut off the protruding vitreous to prevent its interfering with the healing of the incision and instilled a few drops of a solution of sulphate of atropia for the purpose of averting, if possible, secondary iritis; the lids were gently closed; a fold of linen was placed over both eyes; a pad of cotton over that, and the whole firmly secured with Liebreich's bandage.

The patient remaining comfortable and free from pain, and the lids presenting a natural appearance (as was seen when the dressing was changed and a drop of atropia slipped in twice a day) the eye was not opened until the fourth day, when it was done in the ready darkened room and examined by feeble lamp-light.

The incision was found to have healed nicely, the cornea was bright and clear, the pupil black and everything was progressing as favorably as could be desired, but the critical period was yet to come.

The fifth day may, I think, be safely put down as the crisis after cataract operations, for it is on that day that iritis, by far the most frequent form of inflammation consequent upon such injuries, generally makes its appearance. And sure enough on the morning of the sixth day, I was summoned and informed that my patient had been attacked during the night with pain in and around the operated eye, and in that side of the head—in short with ciliary neuralgia—of a very violent character. Upon examination the conjunctiva was found to be a little more congested than usual; the edge of the roll of capsule above mentioned, was seen projecting a little into the pu-

pillary space; the iris was slightly changed in color and there was some increase of the intra-ocular tension.

It was evident that the patient had a serous iritis, but of little apparent severity, by no means sufficient to fully explain the pain. Blood was immediately taken from the temple with the artificial leech; a four grain to the ounce solution of atropia, was ordered every hour with cold water dressings and an opiate at night. By these means the pain was relieved and the patient was comfortable during the day: but about the same hour of the night it returned, and only succumbed, and then not completely to a second full dose of opium. I will not protract further, a history which I fear has already been dragged out to a wearisome length; so, suffice it to say that in spite of a second application of the artificial leech, the free use of atropia (our sheet anchor in such cases) cold applications, hot applications and blisters to the temple, with quinine and opium internally, the violent ciliary neuralgia persisted with occasional remission for five weeks when it ceased apparently from sheer exhaustion. The patient being very home sick and restless, she was allowed to go home about the end of the third week and was not seen again, though I heard from her frequently, until two months after the operation when she came to my office. The eye was then free from all symptoms of irritation, were and had been, she said, for three weeks, but there was a slight adhesion between the iris and capsule which sustained the diagnosis of iritis in the first instance. Upon testing vision accurately it was to be with $\dagger \frac{1}{4} = 20-30$ and an ability to read good print with a stronger glass.

The cause of all the trouble in the case just narrated was unquestionably the remnant of capsule. With a certain amount of cortical matter, adherent to its surface it had as stated, rolled up to one side behind the iris and the cortical matter swelling from imbibition of aqueous humor it had pressed upon the iris, and probably also the ciliary body, exciting as above mentioned, a serous iritis accompanied by pain of unusual violence. Now, whether the pain was purely the result of the increased ocular tension, consequent upon the iritis; or, whether it was attributable to direct pressure upon the terminal filaments of the ciliary nerves by the swollen capsule is not altogether clear. The inflammation, however, it will be remembered was not very marked, and the intra-ocular tension was not great enough, certainly at the times I ex-

ained the eye, to explain the pain; but inasmuch as the tension known to vary considerably within twenty-four hours, and as the attacks came on worse at night when I did not have an opportunity examining the eye, it is by no means impossible that the increased intra-ocular pressure was the cause of it.

But if it was, it is certainly unusual to say the least, that the eye could have come out of it uninjured (I think we may say that it is uninjured as $r=20-30$ is a very good result after cataract operations even under the most favorable circumstances) for it was in a phthisical state a large part of the five weeks, and it is well known how destructive such a condition, particularly if kept up for any length of time, is to the delicate retina and optic nerve.

On the other hand if we attribute the symptoms to direct pressure upon the ciliary body, it will appear still more remarkable that a destructive amount of inflammation was not set up, when we call to mind the sensitive and highly inflammable character of that tissue. Assuming either hypothesis, it was a case rather out of the common run and as such, I trust its recital has not proven entirely devoid of interest.

CORNEITIS.—*Case II.*

I report this case not so much on account of any special intrinsic interest, as for the purpose of illustrating the striking difference between the effects of treatment by astringents locally, and depressing remedies, and atropia locally and restoratives.

Early in November I received a very kind letter from a brother practitioner and friend in the western part of the State, informing me that he had been consulted by a young lady for her eyes and that he had not examined them at all and had advised her to come to me, as he preferred, when convenient, to turn over most of his eye-cases to a specialist; and on the 15th, Miss D., of Guilford County, (the patient referred to) a pale, delicate looking girl of 16 made her appearance. As she was led into my office by her father, with her head tied up in one or more veils, and bowed on her breast in dread of the least ray of light, she presented a pitiable sight, and my sympathies were still more excited when I learned, that both she and her parents feared that she was hopelessly blind.

Owing to the intense photophobia an examination was somewhat difficult; but the trouble being superficial and very marked, it was

easily seen that she was suffering from an acute inflammation of the cornea, involving the whole of each except a narrow rim around the edge. I immediately put a few drops of a strong solution of atropia into the eyes and proceeded to examine into her history. Her parents stated that eight or nine months before they had first noticed that she held her book very near the eyes in reading, but that the sight seemed to be good and remained so for six weeks when the eyes became red, and the cornea slightly smoky which interfered with vision to such an extent that while she could still distinguish objects they seemed to be in a mist or haze.

Five weeks after that they consulted a physician who, they said, put caustic in her eyes three days, but that it caused no more pain than so much water would have done. It must have been, of course, a very weak solution. At all events, it seems to have augmented the trouble, for they further stated that immediately after the use of the caustic the haziness of the cornea was increased, and that the sight was reduced to a mere perception of shadows. From that time she remained much in the same condition until seven weeks before I saw her when she sought the advice of another physician, who put her on atropia locally, she said, and mercury internally, pushing the latter up to the point of salivation. At this time the eyes first became sensitive to light. The solution of atropia must have been of inadequate strength, as it seems to have had no effect whatever. That it was not the cause of the photophobia is certain, for in less than an hour after the application of a strong solution she expressed herself as already greatly relieved and was walking about the room with both eyes open and that too in a light that she could not stand at all before. It is not so certain, however, that the mercury was equally innocuous; indeed, it is more than probable that by breaking down her general health it increased the severity of the local affection.

In the way of treatment, protection of the eyes from light; a drop of a two grain to the ounce solution of the *neutral* sulphate of atropia locally, two or three times a day, a combination of iron, quinine, and strychnine, to be followed by cod liver oil and the syrup of the iodide of iron with good diet internally were ordered, and she went home next day.

A month afterwards, I received a most grateful letter from her

ther stating that her eyes had greatly improved, so much so, indeed, that she "could see to go all about;" that her general health was excellent, and requesting that she be allowed to omit the cod-liver oil and iron, which request was granted on condition that she commence with them as soon as she ceased to improve.

Inflammation of the cornea, of whatever form, unless it be traumatic in origin is a disease of asthenic type, but as the text books give it "with a strong tendency to get well if let alone." It is almost invariably the result of impaired nutrition occurring chiefly among half-starved or over-fed children and young persons, and still more frequently in special forms in those suffering from certain scrasia, notably struma and inherited syphilis. Such being the case it is evident that restorative general treatment is called for. In regard to local treatment I would say that some believing the principles which underlie the treatment of inflammation in general to be universally applicable, think astringents advisable; but inflammation of the cornea is an exception, and it has been the experience of oculists the world over, that in the acute stage certainly, astringents or irritating agents of any sort are positively injurious. It is true that irritants, particularly calomel and Pagenstecher's treatment though astringents are useful too and are of benefit in hastening the removal of the opacity, that is the usual sequel of keratitis; but it must be remembered that all inflammatory symptoms have then disappeared. On the other hand, belladonna, but more particularly its active principle, atropia, in the form of a neutral phosphate is, except in a very few cases, generally of idiosyncrasy, always followed by good results, and its effects are especially seen in the prompt alleviation of the photophobia. It exerts a direct sedative effect on the nerves as it is absorbed through the cornea and paralyzing the accommodation, puts the eye completely at rest. Of the truth of the above, I do not think there could be a more striking illustration than the case just reported.

AMBLYOPIA.—*Case III.*

Not long ago, Mr. J., æt. 59. sought my advice for serious impairment of vision. He thought that he had damaged his eye-sight by reading newspapers at night, but stated that several months before he had suffered from a severe "bilious" attack which had laid him up for two months.

During that attack his sight became so bad that he was unable to read with any glass, and it remained in the same condition up to my seeing him. He had never had any pain or photophobia or other symptoms than failure of sight.

Upon testing his vision it was found to be equal to 20-200 in the right eye, and 20-70 in the left. He was an inveterate smoker and was in the habit of taking regularly five or six drinks of whiskey a day, he admitted—probably he took a half-dozen more that he did not acknowledge.

An ophthalmoscopic examination showed unusual redness of the optic discs and a slight diminution in size of the retinal arteries. The diagnosis was amblyopia from the combined effects of tobacco and whiskey. He was advised to abstain religiously from both, and given a tonic of one-sixteenth of a grain of bi-chloride of mercury in 20 drops of the muriated tincture of iron to be taken three times a day. In about a fortnight he was seen again when he stated that his appetite was ravenous, but his sight was found to have improved very little if at all. The vitalized phosphates prepared by Caswell, Hazard & Co., according to Dr. Percy's formula, were then ordered. He never returned to my office, but I met him accidentally on the street not long since, and was pleased to find him greatly improved in appearance and still more pleased to learn that he could see to read anything. His report was, that his improvement under the phosphates had been rapid, and that he did not find it necessary to finish the bottle (44 doses).

There is no doubt that in very many cases the mere abstention from liquor and tobacco is sufficient of itself to bring about great improvement, if not a cure; but in this case, although aided by tonics of acknowledged value it seems to have been of no avail as there was no improvement worth mentioning until the exhibition of the phosphates, and then it was prompt and decided. It is true that a successful result in one case does not demonstrate the usefulness of a remedial agent any more than one swallow makes a summer; nevertheless, straws show which way the wind blows, and if this one straw should prove the means of putting us on the right track it would be a subject for congratulation, more especially, as the means of cure in optic nerve affections are limited and unsatisfactory. I hope the members of the Society will give it a trial as they have opportunity, and report results at the next meeting.

Some little additional interest attaches to this case, in that it serves to corroborate the views of Dr. d'Aucena on the usefulness of phosphorus in chronic alcoholism, as set forth in a translation by Dr. Dabney, in the last number of the *Virginia Med. Monthly*.

SUPPRESSION OF URINE OF TEN DAYS DURATION.

Read before the Medical Society of North Carolina at its Twenty-Fifth Annual Meeting, Goldsborough, N. C., May 15th, 1878.

By WILLIAM LITTLE, M. D., Raleigh, N. C.

I was called, Wednesday, May 24th, 1876, to see Mrs. C——, and was told that she had not passed urine since the Friday previous, the 19th of May. Found her suffering with intense pain in the back; great nausea, and severe headache—fever, pulse 106 full and strong; there was no swelling about the pubic region or abdomen. Introduced a catheter, and found the bladder perfectly empty; ordered infusion digitalis in half ounce doses with twenty grains acetate potassa every four hours, and warm bath; also, mustard pastes over the region of the kidneys. Next morning her condition was the same; on introducing the catheter the bladder was found empty.

26th. The digitalis and potassa were continued, alternated with *mc. ferri. chloride* and quinine mixture, every two hours; having rested badly the night previous, I gave 1-6 grain morphine hypodermically; after this, she rested several hours and awaked somewhat refreshed.

27th. Introduced the catheter and found the same condition of affairs. Patient had some slight muscular twitchings; skin was beginning to be bronzed, but her mind as heretofore perfectly clear and rational; pulse 130; temperature 98°. She had to-day an abundant mucous discharge from the mouth, the saliva pouring out like one under the influence of mercury—though she had not taken any mercurial during her sickness; ordered bromide potassium in twenty grain doses every three hours.

28th. Temperature 98°; pulse 130; muscular twitching much

increased, her skin the color of an orange and the mind perfectly lucid ; introduced the catheter and found the bladder as heretofore totally empty. Patient died late in the afternoon in a convulsion ; her mind being perfectly clear up to a few minutes before death. She was seen by Dr. Peter E. Hines of this city, and Surgeon Brooks, U. S. A., post surgeon here.

Post mortem on the 20th; twenty-four hours after death, the body much emaciated, rigor mortis well marked, the kidneys were found very hard and the lower part much congested ; weight, $4\frac{1}{2}$ ounces; length 5 inches. Drs. E. Burke Haywood, Peter E. Hines and Surgeon Brooks were present at the post-mortem examination.

The points of interest in this case are, the length of time the patient lived without passing a drop of urine, the mind remaining clear and lucid while urea was in the circulation, and there being no vicarious substitution. Her bowels were normal all the time---this patient was a very thin, spare, habit, the very opposite of all the cases quoted by Sir Henry Hallford, who says the five cases seen by him were all corpulent, robust people.



ANNUAL ADDRESS DELIVERED IN GOLDSBOROUGH, N. C., AT THE TWENTY-FIFTH MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA.

By W. T. ENNETT, M. D.

Gentlemen of the Medical Society of North Carolina :

It is a cause of congratulation that so many of us have been allowed to meet again at this annual re-union of the members of our cherished and useful association. We have again left for a brief season, the consuming cares and trying duties of an ever laborious and progressive profession. We come together in the prosperous and enterprising town of Goldsborough, for purposes of consultation for the public good and the progress of our own honored and beneficent science and art of medicine. It is no narrow object or selfish end that have prompted so many of the leading medical men of North Carolina to institute and carry

ward, for the last twenty-five years the great work of medical improvement and reform in which our Society has, during that eventful period, been so laboriously and usefully engaged. To develop the medical talent of the State, to keep ourselves *au courant* in an always advancing science : to build up in our own noble old Commonwealth, a medical literature ; to cure disease ; to assuage pain, sorrow and suffering ; to elevate humanity ; to remove the causes and sources of sickness ; to prolong human life, and to contribute to the happiness of the people of North Carolina, are the praiseworthy and noble efforts of our beloved and time-honored association.

In coming together, therefore, to take counsel one with another, to the best ways and means of advancing and securing these ends of our Society, it is refreshing that we can again luxuriate in fraternal greetings, the social tie and the warm personal and professional friendships that always enrich and hallow the interesting occasions of these annual re-unions. These yearly assemblages are, indeed, green spots in the desert of professional life. We always return home refreshed, better pleased with one another, more attached to our Society and to our profession, and panoplied anew with the sinews and armaments of war in our daily and severe conflicts with disease and death. Those who are the most regular and punctual in attendance upon our annual sessions are generally those who are the most busy and laborious at home ; and it is a law of our being, which the conscientious practitioner is more apt than any one else to disregard, that rest must be had or the system succumbs. It is a law then of physiology as well as of mental philosophy that the change and recreation, the social re-unions and personal, as well as professional enjoyments which these occasions furnish, are necessary to vigorous growth of the mind.

The subject now before me, which I have selected—to accomplish the task your kindness and partiality imposed upon me is—“ Who is the true discoverer of the circulation of the blood ?” The profession of the whole world was startled something over a year ago by the announcement that a memorial to Cesalpinus, would be unveiled, on the ground that he was the discoverer of the circulation of the blood. Dr. Coradini, Professor of Physiology pronounced the oration on the occasion. He stated that Cesalpinus produced experi-

mental proof of the circulation in 1593, and that Harvey in 1628 could only adduce a fresh proof of the circulation in the venous valves, discovered by Fabricius as early as 1574, demonstrating that these valves must oppose the centrifugal movement of the blood in the veins. He really maintains that Harvey's merit consisted in battling against ignorance and prejudice by divulging the discovery of Cesalpinus. The entire tenor of Harvey's life and work forbids the view that he was a plagiarist, and that as Cesalpinus' panegyrist has recently asserted, he arrogated to himself a discovery which belongs to the latter; contemporary authors failed to recognize in Harvey's teachings a reproduction of those of Cesalpinus.

Cesalpinus, it is true, approached nearer the discovery made by Harvey than any other physiologist. A casual observer might, from Cesalpinus' works, conclude that he had taught the true doctrine of the circulation; but when we go farther, and find that he still regards the flow of the blood comparable to the flood and ebb tides—that the arteries convey the spirit to which their pulse is due, and that he failed to discover in the heart the moving power of the circulation, we cannot but draw the conclusion that his teachings would never have formed the basis of modern physiology. It seems almost incredible for any one, who has studied the subject with any degree of intelligence and thought, to doubt Harvey's claim as the regenerator of physiology. We could quote authority from the first authors of the world if it was necessary to show that Harvey was the real discoverer of the circulation to which we ascribe the origin of modern scientific medicine. Schlegel of Hamburg, Walains in Leyden, Prullens in Rome, Plimpius in Louvain, Rolfink and Descartes all spoke of Harvey as the physiologist to whom the world owed the knowledge of the circulation of the blood. Writers envious of Harvey's fame have brought forth Servetus, Scarpa, Cesalpinus and a host of others claiming prior rights to the honor awarded Harvey. That envious spirit which in a majority of cases give rise to those withering looks, harsh words and unkind acts, often pierce the generous soul with keener agony than the shaft of glittering steel, hurled with Herculean strength and whose wound would seem a pleasure. Every one feels its direful effects, either within himself, as the plague of his own heart, or as "a troubler of the camp" both in sacred and secular matters. We are not inclined to

laud with fulsome flattery the imaginary happiness of those who have preceded us, and say that they felt less of these evils of which we complain ; for in so doing we would be stifling the honest convictions of our minds, and would be making statements which neither history nor experience would corroborate.

That Harvey was indebted to his predecessors more than he acknowledged seems to be reasonable. In the first paragraph of his introduction he says: "As we are about to discuss the motion, action and use of the heart and arteries, it is imperative on our part to state what has been thought of these things by others in their writings, and what has been held by the vulgar and by tradition, in order that what is true may be confirmed, and what is false set right by dissection, multiplied experience and accurate observations." In this spirit of intended candor did Harvey commence his work, he concluded it very differently if we are to judge from his remarks to his fast friend, Dr. Argent, then President of the Royal College of Physicians. "I had no purpose to swell this treatise into a large volume by quoting the names and writings of the anatomists, or to make a parade of the strength of my memory ; the extent of my reading, and the amount of my pains ; because I profess both to learn and to teach anatomy, not from books but from dissection ; not from the positions of a philosopher, but from the fabric of nature ; and then because I do not think it right or proper to strive to take from the ancients any honor that is their due, nor yet to dispute with the moderns, and enter into controversy with those who have excelled in anatomy, and been my teachers."

It was not a question of disputing or detracting with Harvey, but should have been one of justice. In his introduction Harvey tells us he intends to work up the literature of his subject, and then says to his President he had never studied its literature in any manner whatever. It would be most interesting to trace step by step the great discovery, one of the most gradual of any of the great discoveries. Could anything but jealousy have actuated the Italians in trying to snatch the honor from one, which every unbiassed mind readily yields to Harvey. Deeply as I venerate the memory of Cesalpinus and other anatomists who preceded him, I believe he was even more deserving of originality, he labored harder, and was more successful in battling for the truth than has hitherto been acknowledged;

but there is sufficient evidence before us to justify us in appealing to his friends to be satisfied with doing Cæsalpinus justice and not injustice to Harvey.

Harvey did thirteen years hard work after he returned to England, before he was placed in the chair of Anatomy and Surgery by the College of Physicians; another thirteen years elapsed before he published his great essay; and yet, another twenty-one years before he wrote his first disquisition with a view to convert John Riola to his teachings.

That labor improbus of well nigh half a century, for the truth of experimental and inductive philosophy is the glory above all others of William Harvey. Italy has always been a great nursery for men. No two nations can so well afford to venerate each other's worthies.

The cherished members of by gone ages are the world's work. Everybody grows better, and kinder, and happier—in loving them, and leniently, while jealously judging them for their greatness, and for their faults, be they Harvey's or Cæsalpinus', independently of the counteracting influences of national predilections, and in deference only to the paramount claims of historical justice.

It is not fair to ascribe one iota of hatred or jealousy to the physiologist himself; he was unquestionably a genius; but as Mr Gaungee says "he was too essentially peripatetic, too discursive to complete any one great work. Anatomist and botanist, mineralogist and physiologist, a doctrinal controversialist and a practising physician, ever striving to reconcile the philosophy of Aristotle with the results of observation. He embraced so much he could only grasp little. How different was Harvey? Clear-sighted and indefatigable, he saw the truth, and never tired in its pursuit; speculative projects had no charms for him; he only attempted what he could accomplish, and spared no effort to achieve its mastery.

The more carefully we study the history of the circulation, the more we admire the clear, frank and logical mind of William Harvey; the more we are impressed, that the Italians did him a great wrong in erecting a monumental inscription in the University of Rome, claiming for Cæsalpinus that he knew and demonstrated the circulation of the blood. That he knew, we doubt, that he demonstrated it has been proven, I think, beyond a question of doubt, not to be so. Cæsalpinus while residing at Rome as physician to Pope

emont VIII, published a treatise on mineralogy. He died 1603 eighty-four years of age—the year after Harvey left Padua to return to London. The anatomical address on the heart and circulation was published in 1628; the opposition which it encountered notorious. If it was that Cesalpinus had known the doctrine and taught it, if it was known in the schools of the Peninsula, “how is it” Mr. Gamgee asks, “that none of the contemporary Italian professors who joined in the attack on the British physician charged him with publishing what had been already taught by the deceased philosopher John Veslingius one of the most learned anatomists (born 1598, died 1649) wrote on the *Parodoxo Harvejano*. Did any contemporary controversialist write de *Parodoxo Cesalpiniano*? The answer is in the negative, and it was only when Harvey shed his illustrious light on the dark and intricate pages of Cesalpinus that the claim was made for him as he was the real discoverer.”

We admire the erudition, the elaborate research, and the unswerving industry of Dr. Redmond Coxe, but cannot admire his lack of wisdom, and the spirit with which he conducted his inquiry into the claims of Harvey. The profession does not care a straw whether Galen, Aristotle, Hippocrates, Cesalpinus, or who anticipated Harvey by conjectures, hypotheses, or vague suppositions respecting the circulation of the blood. No great discovery, especially in medical science was ever made in a day. The real and effective discoverer, I imagine, is he who fixes the attention of the world on, and proves the discovery by bringing it into complete operation. If Harvey or some other person had not demonstrated the circulation of the blood, all the hints and suppositions of his predecessors from Hippocrates down would have gone for nothing. Of what use was the actual knowledge of vaccination, until Jenner fixed the attention of the profession on it, and proved its efficacy in preventing variola. Great numbers of Harvey's contemporaries denied the truth of the discovery, but afterwards when the world seemed to know they then declared that the discovery was made before Harvey was born. This has ever been the case and arises from the international jealousy already spoken of, which men feel for each other while living rivals. Dr. Coxe was the last man we expected—scholar and learned editor as he was, to attempt to detract from Harvey the renown and fame, which had been accorded him nearly three cen-

turies. Dr. Cox thought the discovery of the circulation had no utility whatever in the practice of physic and surgery. If so why should he want to transfer the honor from one to another. From our present standpoint we must regard that epoch as the culminating point in the possibilities of surgery and medicine. From its date medicine was transformed from a system of superstitions and guesswork to the condition of a progressive science. It is useless to multiply examples. The world has taught us to believe that Harvey was the discoverer of the circulation, and it was only that perverse and willful disregard of the truth that has attempted to alter history at this late day.

Three hundred years ago was born at Folkestone, in Kent, Wm. Harvey, the great discoverer of the functions of the heart and of the mode of circulation of the blood. He was the eldest of seven children, born on the first of April, 1578. He went to Cambridge to be educated for the practice of physic.

At the age of ten years Harvey went to a grammar school at Canterbury, where he was doubtless initiated into a knowledge of the Latin and Greek languages. He remained there five or six years, and at the age of sixteen he entered as a pensioner at Caius College, Cambridge, the 31st of May, 1593. At the age of nineteen he took his A. B. degree, he then left Cambridge to study medicine at the University of Padua, then of wide celebrity, as a first class medical school. Here he had the advantages of cultivating the medical sciences under the ablest masters of the day, such, for instance, as Fabricius, ab Aquapendente. To the first mentioned, Harvey doubtless owed his philosophical spirit of enquiry, and that inductive method of research, which led him to the greatest discovery in physiology. He remained five years at Padua.

He graduated there in 1602, then aged twenty-four years, receiving his academic authority to practice and to teach medicine. The same year he returned to England and graduated at his own University, Cambridge. He then commenced the practice of medicine and then settled for life. He resided in London, and there met and married the daughter of Dr. Lancelot Brown. He thought his influential brothers and father-in-law would greatly aid him in his practice by the weight of their influence. He was admitted a Fellow of the College in 1607. He succeeded Dr. Wilkinson as

physician to Bartholemew Hospital in 1609, by the testimonials given by the physicians and commendatory letters given by the King.

From this time dates Harvey's rise to distinction. In 1618 he delivered a course of lectures on Anatomy and Surgery at the College of Physicians, founded by Dr. Richard Caldwell and there you would see the drift of his mind. In 1620 he gave publicity to his doctrine of the circulation of the blood. In a previous address to the College of Physicians he observes that he had frequently, in his anatomical lectures, declared his opinion concerning the motion of the heart and the circulation of the blood, and had for more than nine years, confirmed and illustrated it by reasons and arguments grounded on ocular demonstration. It speedily excited the attention of anatomists in every European school of medicine, and the theory of Harvey having been triumphantly defended against objectors, attempts were made to invalidate his claims to the discovery; but it is now admitted that whatever hints may be found in the writings of his predecessors, Harvey first clearly demonstrated the system of sanguineous circulation, and thus produced one of the greatest revolutions in medical science.

Five or six years after the death of James I (1632) he was appointed physician to Charles I, his successor, who gave his royal patronage to his scientific researches, as well as to his practical skill. He seems to have taken great interest in the practical demonstrations of Harvey before him and to have shared his anatomical researches.

From this time Harvey's movements were closely allied with those of the Court. In 1633 he accompanied Charles I, on his journey to Scotland; in 1636 he went with Earl of Arundel, whose physician he was, on his embassy to Germany. On this occasion he gave a public demonstration of the circulation at Nuremburg. In 1639 he accompanied Charles I into Scotland, and in the following year he was with him at the battle of Edgehill. After that he went to Oxford, where he busied himself with researches into generation. He was received, entertained and honored there with the degree of D. D.

He returned to London in 1646, being sixty-eight years old. In 1649 he visited the Continent. In 1651 he published his second great work. The year after this Harvey was looked upon by com-

mon consent as the most distinguished anatomist and physician of the age. The College of Physicians placed a statue of him in their hall, so great was their admiration. In 1654 he was elected President of the College of Physicians, but declined to serve on account of his age.

Harvey was a ripe and a finished scholar and an inductive philosopher of a class as high as his illustrious contemporary and patient—the Lord Chancellor Bacon.

He was acquainted with all the men of letters and science of his day; and it does not appear that his views are met with any degree of hostility by the great body of the learned. It is true, that a few of the anatomists indulged in some foolish abuse, but we have it on record that Harvey had the confidence of the most eminent of the nobles. He lived to see his discoveries universally acknowledged and to be deeply revered by his brethren.

His moral character was of the highest, and may be judged of by what he himself has enjoined on the College of Physicians. Having endowed it handsomely, he left extra funds for a meeting and collation once a month, and for a general annual feast of all the Fellows, at which should be delivered an oration in commemoration of the benefactors of the College; and an exhortation to the members to study and search out the secrets of nature by experiments, and for the honor of the profession to continue mutually in love. The College of Physicians of London would have enjoyed a fairer fame, and British medicine a higher reputation, if that body had more faithfully followed the examples and written precepts of their immortal benefactor.

Harvey had refined feelings, and a strong sense of duty. He returned not railing for railing when he encountered his depreciators in controversy. It is true that Harvey, as we are surprised to find—after he had felt all the pangs at first of opposition by the scientific world, after he had come to be so great a man, he too should join in the persecution of Pecquet who discovered the canal which bears his name, instead of trying to rid medicine of the trammels of bigotry, that had so accursed him.

He was faithful to his sovereign, devoted to science, sedulous for the advancement of his profession—munificent to his college, kind and considerate to his relatives.

ANNUAL ADDRESS

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neglect the future; we must not rely too much upon the generous hand of Providence to direct events, but shape them for ourselves. It is far more vital in its influence upon us to have a great and glorious future, than it is to be able to boast of departed greatness. Whence we came is quite insignificant, as compared with whither we are going.

SELECTED PAPERS.

THE LEGAL RELATIONS OF HOMICIDIAL INSANITY.

Abstract from a Lecture

By J. C. BUCKNILL, M. D., F. R. C. P., F. R. S.

The most important of these forms for our present purpose is homicidal insanity, or, as it is more frequently expressed in the recent works of English authors, impulsive insanity to kill. Not that any of them is devoid of a reflected importance, seeing that the argument is urged with pertinacity that the proof of one of these states carries with it the proof of the whole series. Although I am prepared to deny the truth of the theory in all of its ramifications, time will only permit me to discuss it with reference to its crowning point of mischief if it be untrue—namely, in its application to excuse the guilt of murder. Our colleagues and countrymen have adopted the theory of impulsive insanity from the distinguished French physicians who flourished early in this century, and especially from Esquirol, Georget, and Marc, but I do not remember to have seen it remarked that these writers derived their inspiration from an earlier and still more celebrated authority—namely, from the founder of phrenology. It seemed strange that although the first instances of *monomanie homicide sans délire* of the French authors are quoted from Gall, no credit for the idea was ever given to him; but a reference to Gall's great work, "*Sur les Fonctions du Cerveau*," affords some explanation. In this treatise, replete with learning, full of common sense, and only spoiled by the dogmatism of crani-oscropy, he indicates clearly the natural growth of "the impulse to

ll, with enfeeblement of the moral liberty." "There is," he says, "in man an inclination which advances by degrees, from a simple indifference to witness the sufferings of animals, and a pleasure in seeing death inflicted, even up to the most imperious desire to kill. Sensibility may reject this doctrine, but it is only too true. Whosoever wishes to form a right judgment of the phenomena of nature, ought to have the courage to recognize things as they exist, and in general not to make man out better than he is." "There are," he adds, "both among adults and children, both among common and cultivated men, some who are sensitive, and some who are indifferent, to the sufferings of others. Some feel pleasure in torturing and killing animals, without our being able to attribute it either to education or to habit"; and he cites examples in which men had become butchers, and even executioners, to gratify this inclination, and a number of other horrid instances less within the sufferance of the law. The most remarkable of these is that of the Duc de Bourbon Condé, Comte de Carolais, who tortured animals, exercised atrocious barbarities upon women, committed many murders, without interest, without vengeance, without anger; and who even shot men while roofing houses, for the barbarous pleasure of seeing them fall. This case has been repeatedly quoted from Gall as an instance of homicidal insanity or of moral insanity; but although he admits that this "detestable inclination may always be derived from a vice in the organization," he adds—and there is the great difference between him and his French disciples, which they pass over in silence,—"Up to this point the inclinations [*penchants*] of which I have spoken are not yet included among those which characterize a true alienation. These inclinations necessitate the most energetic measures, and criminals of this kind cannot be tolerated in society. Most of them even, in order that they may not destroy men, ought to be themselves killed like ferocious beasts." This is a notable admission of the German philosopher that a man suffering from detestable inclinations or dispositions which have their sole origin in a vice of the organization, is not a lunatic, and ought to be punished.

The French medical advocates of homicidal monomania whom we have named all admit that there are two distinct forms of the malady: one in which there is delusion or some other recognized form of insanity, and the other in which no derangement of the

intelligence exists. It is true that they put the assertion in a somewhat less positive form than this, an elastic phrase being usually employed, like that of Esquirol, who, after asserting the existence of this kind of insanity, says that "On ne peut pas observer aucun désordre intellectuel"; and a corresponding loop-hole of hesitancy in statement is generally met with in the writings of our physicians who embrace the theory; although I think that, from Esquirol down to the last English writer on the subject, no one would be inclined to admit that, if any intellectual disorder did really exist, it would be likely to pass undetected by their skillful methods of inquiry. Their argument, moreover, in favor of homicidal insanity without any intellectual disorder, is founded, not upon the probability of intellectual disorder escaping detection, but upon other grounds—namely, upon the assumption that the passions and affections, or the will itself, may be diseased. Esquirol, quoted with approval by Georget, expresses this last argument in his suggestive manner. "If the intelligence and even the moral sensibility can be perverted and abolished," says he, "why should not the will, that complement of the intellectual and moral being, not also be deranged or destroyed? Is it that the will, like the understanding and the affections, does not experience vicissitudes according to a thousand circumstances in life? Has the will of the infant and the old man the same force as that of the adult? If it be so, why should not the will be subject to troubles, to perturbations, to morbid weaknesses, however incomprehensible the state may be to us?" A noteworthy passage this seems to be, not only in support of the theory of our recent English writers who have declared that insanity is a disease of the will, but as a caution to our legal authorities that they should not needlessly vivify this Frankenstein of a will, for if there be a criminal will there may possibly be a diseased will. But surely both lawyers and physicians have something more certain to speak about than the attributes of the will.

Esquirol's description of this kind of homicidal insanity has become classical, our own authors having added nothing to it, and only altered it by changing the words "puissance irrésistible" into their new shibboleth—uncontrollable impulse. "There exists," he says, "a kind of homicidal monomania, in which one cannot observe any disorder of the intellect; the murderer is impelled by

an irresistible power, by a dragging onwards, which he cannot overcome, by a blind impulse, by an unreflecting determination. One incapable of imagining that which carries the man without intermit, without motive, without intellectual error, to an action so atrocious and so contrary to the laws of nature." This is the statement around which all this discussion rages, and which has been called nonsense and mischievous rubbish by English judges, and by terms not more complimentary by legal authorities in the country of its origin. This is the statement of fact supported by the theory that a man will become insane, and which Caspar condemns in these decisive words—"We arrive at the dogma that *there is no such peculiar species of insanity as that termed homicidal insanity, or homicidal monomania, and that forensic medicine neither can nor ought to recognize any such.*" Yet it is to this statement of fact our English authorities on the irresponsibility of the insane still adhere, and support under the slightly altered designation of homicidal or impulsive insanity, or uncontrollable impulse to kill.

It is of the first importance to understand, if we can, what is meant by an uncontrollable impulse to kill. Legal authorities, who have not unnaturally shied at the phrase, have, I think, been scared by the wrong end of it. They object to the predicate *uncontrollable*, averring that it means that which is not controlled, whereas there can be no doubt that the medical writers who have used it intend to designate by it, action which cannot be controlled; and, as we have seen, this is the very essence of an act for which an insane person ought not to be held responsible. The subject *impulse* seems to me to be really the mischievous factor in the proposition, and its misleading application to intentional action—that is, to contract. A recent medical author, whom I much respect, speaks of it as a "sudden blind, motiveless, unreasoning impulse to kill"; and another author as "the frightful *impulses* which spring up in the diseased mind, and drive the individual to a deed of violence—as little under control as the convulsions of epilepsy, and the origin of them, perhaps, as little within the individual's knowledge as the origin of the impulse which entered the unfortunate herd of swine and drove them over a steep place into the sea, so that they were drowned, was within their knowledge." And I might multiply quotations, perhaps not quite so strong in epithet or remarkable in simile, but all stamped with the same belief that nothing exists, and

nothing is wanted, "between the diseased condition and the act" save and except this *impulse*, the characteristics of which seem to be quite unlike those of any other mental state resulting in conduct. What is this strange power which, unconnected with the sequence of mental movements, arises without precursor; which is blind, although it obtains its object; which has action without motive, and comprehension without reason? I must own that, to my mind, this term "impulse" is a word which darkens knowledge, and that its use seems wrong and misleading, in that it pretends to give the appearance of explanation to a problem of life which it is greatly to the interests of the community should be clearly stated and thoroughly unravelled. Suppose we change the word to its synonyms, and say disease of the brain gives rise to a sudden blind, motiveless, unreasoning *push* or *thrust* forward to kill, just as inclination means the mental *bend* forwards. There is no desire or motive or reasoning intention to strike the blow, but only that which we call a *push* received from the diseased action of the physical organ. No doubt impulses of the mind are spoken of, in the slack and slovenly parlance of common life, to express rapid wishes and desires, whether they be or be not checked by others of greater force, as when it is said that a man has an impulse to throw himself from a height, which is an unreasonable desire very frequently felt, but very rarely indulged. To say that I have an impulse to throw myself over a precipice, but that I have a stronger impulse not to do it, is an odd use of language, which seems to lead to the conclusion that the word "impulse" is used instead of the word "desire" or "wish," when, upon reflection, the thing we wish to do or are impelled to do seems to be wrong, or bad, or dangerous. And with regard to the many men of whom we must believe that they have had the wish to kill, but the stronger wish not to kill, what do we get but ambiguity and obscurity of meaning by saying that they have had frightful impulses to commit murder, but stronger impulses not to commit murder? It may aid us in our inability to understand what is meant by this so-called impulse to commit self-murder. Referring to this, the author above quoted remarks: "It is certain that there is an exactly similar form of mania or monomania in which *the patient is possessed with an impulse to kill somebody*, is infinitely miserable in consequence, *yet exhibits no other mental derangement*. * * * But there is not

same willingness to recognize disease when the morbid impulse is not suicidal, but homicidal." As an "example of uncontrollable morbid impulse with clear intellect and keen moral sense," he gives the case of a lady who was seized with a strong and persistent suicidal impulse, without delusion or disorder of the intellect. All fault that could be found with her intellect was that it was engaged in the service of the morbid propensity. She secretly tore her nightdress into strips while in bed, and was detected in the attempt to strangle herself with them. For some time she attempted to starve herself by refusing all food. She threw herself into a reservoir and was nearly drowned. After this she gradually regained cheerfulness and love of life. Now, it is to be remarked that in this and in other cases of a like kind the morbid impulse is long enduring; that it gives rise to actions of patient deliberation and cunning contrivance; and therefore that the word "impulse" means as inapplicable to such a persistent desire as it would be to say that Cruden, being insane, had an insane impulse to write the concordance. Socially and ethically, the difference between suicide and murder is enormous, notwithstanding that they are so often joint results of undoubted insanity. But who will affirm that the desire to end one's days is not controllable, and is not constantly controlled by fear of a greater evil? Not, indeed, by the exposure of the naked corpse, which is said to have stopped an epidemic of suicide among young women, but by the fear of shame among one's fellow-men, the fear of grief and ruin to those who love, and above all by

"The dread of something after death.

Thus conscience doth make cowards of us all."

and it difficult to advance arguments in contravention of the theory that homicidal insanity depends upon disease of the will, or against insane impulse to kill without motive and without other mental derangement, simply because I cannot understand it; but the statement of fact that it is certain that there is such a form of disease deserves our earnest attention.

In the earlier editions of the "Manual of Psychological Medicine," fifty of the more remarkable cases of homicidal insanity on record were analyzed by my indefatigable fellow-laborer in that work, and of these no less than thirty-five displayed no marked

disorder of the intellect. Of the fifteen remaining cases, in ten there were delusions, and in five deficiency of intellect, and these of course came under another category altogether. Unfortunately, out of the whole number of fifty cases, only four have an English reference, and of the foreign ones almost the whole are from Esquirol and Marc, with a few from Otto, all of whom were committed to the theory, and whose accuracy of observation as to the facts is the very point at issue. Moreover, the French law of insanity is essentially different from our own, the sixty-fourth section of the code enacting that "there is neither crime nor offence when the accused was in a state of insanity at the time of the action," thus leaving the whole question widely at large, so that the proof of any state which can upon any theory be deemed insanity may be sufficient to exonerate. Of the English criminal cases which have been cited by various authors as examples of homicidal and impulsive insanity, those of which I have been able to obtain any information do not seem likely to bear thorough investigation. The celebrated Morningside case, if I am rightly informed by an eminent mental physician who knew the man, was clearly one of chronic lunacy with delusions. He has been seen with a placard on the wall over his bed, with the words "I am the Almighty." In Dr. Townall's case I am informed that the delusions of persecution and poisoned food which existed before the homicidal acts, but could not be detected during his residence at Bethlem, are now again quite recognizable. In other cases which have been referred to as instances of homicidal insanity, no insane impulse nor other signs of mental disease has been discovered after acquittal. Bisgrove's case has been so frequently referred to, never manifested any symptoms of mental disease while at Broadmoor; and I venture to assert that there is no example of *monomaniac homicide sans délire*, or of impulsive insanity to kill, which can be referred to as existing in any English asylum, in which there are no other symptoms of mental disease. In all my own experience, which is not small, I have never met with such a case, and I have made inquiry of two of my friends whose means of observation have been of the largest, and whose methods have been of the most accurate and trustworthy, and each of them has assured me that he has never met with a single instance of homicidal insanity without other distinct symptoms of mental disease. When I mention the names of Dr. Crichton

owne, the Lord Chancellor's Visitor, and for a long time the medical chief of the vast West Riding asylum, and of Dr. Orange, Medical Superintendent of Broadmoor, and add to their names my own, I think I present to you a trio of observers whose field of experience has been so wide that a form of insanity so pronounced in its characteristics as that under discussion could scarcely have been expected to be embraced within it. Certainly I think such an event highly improbable; but that instances of men suffering from the so-called uncontrollable impulse to commit homicide without other mental disease should have come within the field of our observation, and yet not have been observed, is, I think I may say, impossible. The truth seems to be that homicidal lunatics are only too common, and that if you inquire carefully you will always find the tendency, but that even if you do not look carefully the prominent symptom of homicidal violence cannot escape attention, although you may fail to observe its concomitants.

I am glad to be able to support this opinion with the concurrence of the late Dr. Morel, of Ronen, one of the most able, as I think, of French alienists. He declares that the cases in which an individual is said to be dragged by a blind instinct to kill—"par quelque chose d'indéfinissable que le port à tuer"—must be very rare, and that facts of this kind rest upon incomplete observation of pathological phenomena and ignorance of the motives which influence the insane. The conclusion, therefore, to which we must come is, that the theory of homicidal insanity—the impulsive insanity which kills—either rests upon imperfect observation, which has failed to detect real derangement, or upon mistaken estimates of real criminality.—*Medical Times and Gazette.*

THE METRIC SYSTEM IN A NUTSHELL.

By EDWARD WIGGLESWORTH, M. D.

"Universality, Uniformity, Precision, Significance, Brevity, and Completeness." "A system of weights and measures born of philosophy rather than of chance."—CHARLES SUMNER.

Surgeon-General Woodworth, of the United States Marine Hospital service has issued a circular, with the approval of Secretary

Sherman, requiring medical officers of the Marine Hospital service to make use hereafter, for all official, medical, and pharmaceutical purposes, of the metric system of weights and measures, which had previously, under the act of July 28, 1866, been adopted by this service for the purveying of medical supplies.

The metric system is already *legalized* in both America and England. The only question now is, which of the two, the most progressive or the most conservative nation on earth, shall be the first definitely and finally to adopt it as an exclusive system? (N. B. England was four hundred years behind the Continent in adopting our present arithmetic.) Russia has already taken the preliminary steps towards its final introduction. The rest of the civilized world long since made the system obligatory, in whole or in part, except Sweden alone, where its obligatory use is to date from a period in the future,—1889.

Now what is this metric system?

Metric is from the Greek word *metron*, a measure, spelled with *epsilon*, *e* short, and therefore pronounced mêt-ric.

The meter (measure) is practically a fixed quantity, namely, the ten millionth part of the earth's quadrant from the equator to the north pole. With the meter everything can be measured, for it is itself the unit of length; a cube, the edge of which is the tenth of a meter, is the unit of capacity (liter); and the weight of a cube of rain-water at its extreme contraction, the edge of which cube is a hundredth of a meter, is the unit of a weight (gram).

It is a gram alone which concerns physicians, for in the metric system *everything is best prescribed and dispensed by weight alone*; numbers upon a prescription paper being regarded by a pharmacist as representing grams, unless the contrary is expressly stated. The fractions are always decimal.

The table is easily learned. It consists of six words as prefixes, whether we deal with grammes, liters, or meters. These are: deci- for tenth, centi- for hundredth, milli- for thousandth; deka- for ten, hekto- for hundred, kilo- for thousand. Having these few words, the terms of troy, avoirdupois, and apothecaries' weight, and of liquid measures, may be relegated to the limbo of pounds sterling, shillings, four-pence-ha'pennies, and farthings. As we say dime, cent, mill, so we say decigram, centigram, milligram. These prefixes are Latin, and *diminish* the value. Dekka-, hekto-, and kilo-

Greek, and *increase* the value. The mnemonic is GILD, that Greek Increases, Latin Decreases. Dekka occurs in the English word decade, hekto in hecatomb, kilo in chiliad.

Being accustomed to the words mill, cent, and dime, we shall find the words 'milligram,' 'centigram,' and 'decigram' quite as simple and easy to pronounce as our words 'pennyweight troy,' 'hundredweight avoirdupois,' 'scruple apothecaries,' etc., notwithstanding the assertion to the contrary of those who grieve to give up the 'short and sharp Anglo-Saxon words used in our present familiar old tables' of weights and measures."

Practically, moreover, for physicians the whole system is reduced to grams and centigrams, just as in money to dollars and cents. On the right side of the prescription paper draw a perpendicular line from top to bottom. This decimal *line* takes the place of all the decimal *points*, and obviates the possibility of mistakes. This is the way dollars and cents are separated on business papers. Additional security is gained by writing the decimal fraction (centigrams) of half size and raised above the line (of grams), since it represents a numerator of which the denominator—100—is omitted. This too is a plan which is in vogue in State street. To make assurance doubly sure, "grams" may also be written over the meter column or figures, and, if wished, the word "decimals" over the decimal column.

Now what is a gram? or rather, what are the values, metrically expressed, of our present awkward weights?

	Prussian.	Practical.	Precise.
Grain i. =	0.06	0.06	0.065
℥ i. =	1.25	1.25	1.29
3 i. =	3.75	4.0	3.89
℥ i. =	30.0	32.0	31.1

The "practical" table alone concerns us. The "Prussian" (by order of the Prussian ministry, August 29, 1867) is given merely to show that our table is even nearer the actual truth than one which has been proved by actual experience to answer every purpose. The values of the grain and scruple are a little too small. If they are used for powerful drugs this is an error in the right direction. The values of the drachm and ounce are a trifle too

large, but the proportions are retained ; therefore the ratio of drug to vehicle is also adhered to.

. A prescription written metrically is always proportionate, and whether the pharmacist uses pennyweights, pounds, or tons : gills, pecks, or chaldrons ; pints, gallons, or hogsheads, the ratios are preserved, and a teaspoonful dose contains the same amount of medicine.

As regards administration ; a teaspoonful represents five grams, a tablespoonful twenty grams ; for a teaspoon holds one and one third fluid drachms, a tablespoon a trifle more than four times as much.

In the metric system *everything is weighed*, thus obviating the difficulties of evaporation, refraction, and adhesion, and obtaining more conveniently, more exact results. In our old "systemless system" some fluids were measured. How shall we obtain with weights the desired bulk of fluids with varying weights ? Must we learn the weights (specific gravities) of all fluids ?

Not at all !

(1.) Fixed oils, honey, liquid acids, and chloroform must at present be prescribed in our old weights, not measures, according to the Pharmacopœia. Here change old weights to metric ones.

(2.) Not enough chloroform or ether is included in any one prescription to admit of harm arising from the amount contained in a single dose, even were their weights regarded as the same with that of water. Moreover, it is not difficult to remember that ether weighs seven-tenths as much as water, chloroform twice as much as ether.

(3.) There remain infusions and tinctures, glycerines and syrups. These four are used in bulk as doses, or as solvents or vehicles. The two former may be regarded as identical in weight with water ; the two latter as one-third heavier, and when prescribing these we need merely write, by weight, for four thirds as much as we should write for were we prescribing water, and we obtain an equal bulk. The teaspoon or tablespoon dose will then contain the desired amount of the drugs employed.

Or simplest of all, we can make any mixture up to any desired bulk by merely directing the druggist to use enough of the vehicle to bring the whole mixture up to the requisite weight for that bulk.

The Metric Bureau, 32 Hawley street, will furnish metric prescription blanks to order, to druggists or physicians, at four-fifths the printer's rate.

Old Style	Metric.	
	Gms.	
i. or gr. i. equals.....		06
i. or 3 i. equals.....	4	
i. or $\frac{5}{8}$ i. equals.....	32	

N. B.—The decimal *line*, instead of *points* makes errors impossible. C. used for gms. causes an error of five per cent. (excess). A teaspoon is five grams; a tablespoon, twenty grams.

THE YELLOW FEVER EPIDEMIC OF 1876 IN SAVANNAH.

By J. C. LEHARDY, M. D.

The lessons taught by the fearful epidemic in Savannah are being carefully studied and elaborated by the brave men and scholars who fought the disease so earnestly in 1876.

Dr. LeHardy's paper is very clear and comprehensive. He commences with the history of the epidemic, showing that the year previous to the outbreak that the rain-fall was remarkably below the average, and most of the swamps were so dessicated that there were great crevices in them where the water had been formerly deepest. Malarial fevers were therefore not so abundant. The winter being mild, vegetation suffered but little, becoming luxuriant early in the following season. Then there came a time of flooding of the swamps and standing water and sobby ground were common, as the ditches during the dry season had been filled with débris and trampled in by cattle.

In February and March the stagnant ponds were already coated with algæ, water ferns and other water plants belonging to that zone. In June and July he collected a water fern, the *Azolla caroliniana*, and also at this date the weather becoming very hot, rain-water standing in the streets a single night bred a coating of vegetable scum, in which he found specimens of *Protococcus pluvi-*

alis, one of the algæ. In July and August boots and shoes would become covered with mould (*Penicilium glaucum*) in a single night.

In June the rain-fall was so excessive (18 inches in 16 days) that the pressure of the accumulated waters broke through the dams protecting the low grounds on the western side of the city. Such an immense exposure of inundated land produced an immense bed of spore-bearing and other plants, and noxious gases were evolved.

On the north side, Hutchinson's island, 200 yards from city front, was in a sad condition as regards drainage; and Fig island on the east-northeast, was in the same condition.

In the city proper there were three thousand three hundred and sixty-five privy vaults, built of porous uncemented bricks, always allowing soluble materials to percolate to the drinking water bed through the sandy soil.

There were over twelve hundred cess-pools also constructed as the privy vaults, and the sewerage was generally defective.

The sections of the city usually inhabited by the working classes (white and black) were in their usual wretched sanitary condition. This condition of things had existed for years, and although it was not in Dr. LeHardy's judgment and efficient cause for yellow fever, yet during an epidemic it could aggravate its ravages.

July and August were remarkably hot months, the maximum thermometer in the shade being 99°, 100°, 97°; mean 80°, 84°, 82°; and the velocity of the wind for twenty-four hours, twenty-four miles in June, and thirty-four in July. The nights were so hot and stifling as to keep the body in profuse sweat, scarcely allowing sleep, and depressing the nervous system. The state of the atmosphere placed the population in a very favorable condition to be affected by malarial and other diseases.

Early in June, Dr. J. B. Read treated a case of sporadic yellow fever, and another on the 5th of the same month, and another on the 14th and 22d. In August, other cases occurred, one terminating fatally with black-vomit. In August a number of cases of congestive and other malignant fevers occurred. By the 20th of September the fever was a pronounced epidemic, raging with terrific violence from September 6th to October 6th. The epidemic did not disappear until the occurrence of a light frost on the 14th of November.

Dr. LeHardy then reviews the causes of the epidemic, commenc-

ing with the history of the several visitations of Savannah by the yellow fever. He thinks the theory of importation difficult to sustain ; * * yet, he believes that by the testimony of other writers and by his own experience, "that the '*contagium vivum*,' producing yellow fever, *when left undisturbed*, can be carried in ships or any other closed vessel to any distance over land or water. That persons entering such closed vessels, and inhaling the poisoned atmosphere may develop the disease ; or that this poisoned air being liberated by ventilation, will spread and reproduce the yellow fever germ, *provided it finds the atmospheric and cosmic conditions necessary to its growth*. It is also my conviction that so far as Savannah is concerned, the yellow fever germ can originate there without importation."

* * * * *

Dr. LeHardy collected with great care, during the epidemic, three specimens of black vomit, one of urine, one of blood, one of fever, and two of dust floating in infected houses, and having kept them sealed, instituted experiments. He satisfied himself that there is a "yellow fever fungus," and that it "cannot complete its growth and fructify at a temperature much less than 80°, F."

Dr. LeHardy gives the following reasons for classifying yellow fever as a malarial disease :

"1. Because it belongs exclusively to malarial countries. 2. Because I believe its cause to be spores of fungi floating in the air. 3. Because in violent cases terminating in black vomit, there are instances of indubitable remission or intermission in the fever, and in the lighter cases these symptoms are frequent. 4. Because, in any treatment of the negro population ninety per centum presents the remittent or sometimes the intermittent form. 5. Because relapses occur as in all malarial fevers. 6. Because in the majority of cases, the fever is controllable by the use of sulphate of quinine.

These opinions our authors tells us are founded upon an accompanying table of 171 cases arranged after the following manner : Nature, age, sex, date of attack, date of convalescence, date of death, relapse, black vomit ; the pulse and temperature for the first, second, third, and fourth days ; state of intellect, general symptoms, character of urine ; treatment and remarks." Of the 171 cases treated only 23 died. An examination of the course of

treatment shows that calomel, quinine, dovers powder, baths, blisters, and champagne were the medicinal agents employed.

Dr. LeHardy's conclusions are :

“1. That yellow fever can *originate* here (Savannah) under certain conditions of earth and air.

2. That the sanitary conditions of the lower land surrounding the city, *is the most important factor* in the production of our yellow fever.

3. That *importation* is not necessary for its production, and, therefore, the strictest quarantine of ships, vessels and railroad trains will not prevent its recurrence in this place.

“*Drainage* is the simplest, cheapest and surest means of preventing *paludal* fevers,” or to use the words of the Committee of the State Board of Health : ‘The low grounds surrounding the city as with a cordon of malarial influences, should be thoroughly and systematically drained, at whatever cost.’”

“Quarantine should be abolished ‘as but a relic of dark ages,’ and for it should be substituted *modern scientific disinfection*, which, in a few hours, will remove all causes of infection from any ship or closed vessel, without hampering commerce.

“*Modern hospitals* should be provided in a suitable locality for the reception of sick and infected persons.”

THE POPPY IN AFRICA.

The cultivation of the opium poppy (*papaver somniferum*), which has been hitherto exclusively confined to the East, bids fair to become thoroughly established and remunerative in Eastern Africa. Seeds of the best kinds have been imported from Malwa into Mozambique, where 50,000 acres of uncultivated State land have been granted to a company, with a capital of £178,000, for the purpose of cultivating and trading in opium. Besides the grant of land the company also receives from the State “the exclusive right for twelve years to export opium free of duty through all the custom houses of the province.” It is satisfactory to learn that the poppy plants are thriving, and the fruits are reported to be larger than those produced in the best opium districts of India.—*Nature*.

CORRESPONDENCE.

OUR PARIS LETTER.

Hysteria in a boy of Twelve Years—Professor Charcot, his teaching of the Doctrine of Caseous Pneumonia and Tuberculosis—His Investigation of Epithelial Visceral Cirrhoses—M. Alfred Gigat Prefect of Police to the Arrondissements on the Preservation of the Public Health—Professor Lister on Anæmia induced by Elevating a Limb—His views as to the Septic Property of Open Air not Shared by all European Surgeons—The Last Meeting of the Academy of Medicine—Arrival of Distinguished American Physicians in Paris.

11 RUE NEUVE DES CAPUCINES,
PARIS, June 20th, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—I was recently called to a case of hysteria in a boy of twelve years, which had existed for some time without having been recognized by his regular medical attendant. Finding the symptoms urgent, I gave him injections of chloral in solution, and applied ice to the spine, with the result of promptly restraining the paroxysms. During my absence at a subsequent period, he became again convulsed, when instead of resorting to the remedies which had been previously employed, his attendant made the attempt to quiet him by the forcible administration of chloroform. Instead of the desired anæsthesia a fearful delirium—an excitation of the most aggravated and distressing character—was induced, which continued for several days and precluded a recourse to the treatment which had originally proved so successful. In this emergency, I addressed a note to Professor Charcot requesting a consultation at the earliest possible moment. As an act of special courtesy to an old friend, he came on the succeeding day at a late hour, although to do so he had to disregard engagements which would have required for their fulfillment an entire week—such is the demand for him at the present moment in Paris. After making a thorough examination of the patient he agreed to the correctness of the diagnosis already made, and recommended a course of hydro-

therapy in an establishment especially devoted to that mode of treatment. As you are doubtless aware, Charcot believes that the sovereign remedy for hysteria in all of its phases is cold water, together with the removal of the patient from the scenes and persons in connection with which, and with whom the disease has been primarily developed. His advice was followed in this instance, and the little fellow began to improve at once, and is now comparatively well. I have referred to this case, not so much because of any special attention which attaches to it, but rather for the purpose of introducing the great man whose experience and skill I was so fortunately able to invoke in behalf of my patient. As a neuro-pathologist, in the broadest and highest sense of that term, Charcot stands *primus inter pares* in the medical world of France. He is in fact, the great authority to whose dicta the profession bows in unquestioning reverence, and in whose career it feels the deepest interest.

It is, therefore, with no unnatural pride that I am able to number him among my personal friends and to claim an acquaintance with him which dates back more than twenty years. When a student of medicine here in 1854, I found in the service of Piorry at *La Charité* an Interne in whom I at once took the deepest interest. There was something in his handsome but grave countenance, and in his retiring but dignified mien which attracted me greatly; and when I ascertained that he spoke English well and particularly esteemed my countrymen, I sought his acquaintance, and soon established cordial relations with him. In conjunction with several other American students, I induced him to give some lessons in Auscultation and Percussion—which his intimate acquaintance with these subjects and his accurate knowledge of our mother tongue enabled him to make exceedingly attractive and instructive; and we finally separated with many kindly remembrances of our brief but pleasant intercourse to find out what the future had in store for us. After the lapse of twenty years I returned to Paris, the sole living representative of the little class which in the dawn of the wintry days so long passed had followed the obscure Interne, through his wards, to learn that he had attained the most conspicuous position in the profession of his country—that his labors were appreciated throughout the world of science and that he occupied “the chair of Curvillier” in the Medical School of France. Upon making myself

known to him, he recalled our early association with unaffected pleasure, and manifested his friendship by exerting his influence to secure for me the authorization to practice medicine in this city—the greatest possible favor that he could have conferred.

Professor Charcot is doing an immense private practice. The victims of various diseases from all quarters of the globe flock to Paris to avail themselves of his skill. It is impossible to obtain an interview with him at his house without attending for several consecutive days during his hours of reception. His engagements for visits and consultations usually anticipate all the available hours of a week and frequently of a much longer period. And, yet, though thus overwhelmed with professional work, he manages to find the time for investigations from which the medical world gathers the richest tributes to its pathology and therapeutics. Not satisfied with exploring the field of neuro-pathology, he has investigated with equal fidelity and success nearly the whole domain of medical enquiry. Only quite recently he delivered a most interesting lecture before the Société Anatomique on the subject of caseous pneumonia in which he ably combatted the views of Virchow in this regard and sustained those of Laennec. According to him this disease does not originate in a simple broncho-pneumonia but in a lesion which is essentially tubercular. The nodules visible to the naked eye in sections of the pulmonary tissue are really constituted by an aggregation of miliary tubercles. When a pulmonary lobe is incised, two orifices become visible, one of the artery and the other of the bronchus. Around the latter the lesions are grouped in the form of an irregular mass, separated into two zones—the first being central, yellow, caseous, and exterior. This zone is formed of a series of tubercular granulations each containing a giant cell and nuclei; whilst around it the pulmonary alveoli are in a normal condition, or, at least, present no lesions of a tubercular character. Caseous pneumonia as the result of caseation of pulmonary exudation independent of tubercle was found in none of the specimens examined; and Charcot thinks that the existence of a disease originating in that way is not supported by the facts now known to the profession. He also teaches the doctrine that all is tubercle in pulmonary phthisis except the irritative lesions in the neighborhood of the affected points or in other words, that the disease is essentially a tuberculosis. These views, supplemented by

the argument of M. Thacon lead directly to the establishment of identity in the essential lesion which characterizes phthisis and scrofula—to a re-edification of the theory of the unity of tubercle as was originally advocated by Laennec.

Charcot has also investigated the important subject of epithelial visceral cirrhoses, and has recently delivered a very interesting lecture in regard to it. Space will not permit a thorough review of the grounds taken by the learned Professor, but it will suffice to say that after careful examinations of the changes which take place in lungs after acute or chronic pneumonia, in the kidney after the development of true Bright's disease, and in the liver after the occurrence of inflammation of that organ, he finds them to be, 1st. Modifications of the glan-epithelium of hypoplastic origin. 2d. Modifications of the connective tissue wall supporting this epithelium, and which is divided from the mesoblast. As the latter change is really of primary occurrence, he calls the cirrhoses which present themselves in this connection, "epithelial." He also calls attention to the circumstance that these pathological changes are, *mutatis mutandis*, fundamentally the same—a reversion to the embryonic state of the parts developed from the mesoblast. It is by taking these distinctions as a point of departure that he hopes to be able to arrange the chaos which at present exists in the cirrhoses of organs. At any rate, they serve to show the subtlety of the mind of the investigator and the profundity of the problems to which he devotes himself whilst overwhelmed with the responsibilities of professional duties which would absorb, if not exhaust, any man who had not inherited the prerogatives of genius in their fullest measures.

M. Alfred Gigat, the able Prefect of the Police of Paris, has just addressed a special circular to the Mayors of all the Arrondissements, reminding them that they are responsible for the public health, and urging them to take proper measures for its preservation. In this circular all the laws respecting public hygiene are recited, from which it appears that the authorities are really invested with extraordinary powers in this regard. The police can at any time enter any hotel or lodging house for the purpose of ascertaining its sanitary condition and of taking measures for the protection of its inmates. The authorities are also bound to give attention to every complaint upon the subjects embraced in the cate-

gory of *nuisances*; and visitors have it in their power to protect themselves against ill-ventilation, imperfect drainage, &c., &c., by simply addressing a communication to the nearest commissary of police. So thoroughly have the Mayors and their subordinates carried out the instructions of their sagacious chief that, although the city has for weeks been overwhelmed with strangers from every civilized country, nothing like an epidemic has occurred, and the weekly mortuary returns compare most favorable with those of ordinary years. In connection with this reference to the Exposition, I will take the occasion to say that owing to very pressing professional engagements I have not yet been able to make my proposed examination of the medical exhibit, and I am, therefore, unable to describe it in this communication.

Professor Lister, now of London, has just visited Paris, having come as a Juror in the Section of Medicine, Hygiene, and Surgery. While here he delivered a lecture before the Academy of Medicine on the influence exerted by position upon the circulation. The point of his address was an attempt to demonstrate that the anæmia which results from the retention of a member in an elevated position is due, neither to the influence of gravity nor to vasomotor paralysis, but to a reflex action induced by a depletion of the veins and the contraction of the muscular fibres of the arteries. In support of this explanation he adduced many plausible arguments referred to some interesting experiments which he had made upon the horse; while he sought to deduce from it a more systematic and thorough resort to position in surgical practice, especially in the treatment of local inflammations and in the arrest or prevention of hemorrhage. He, also, sought to illustrate the truth of his theory by the relief of epistaxis which results from the elevation of the arms, asserting that their elevation produced a reflex contraction of the arteries distributed to them, and consecutively a sympathetic contraction of the face. He was very well received by the Academy, and his manuscript was given to a committee composed of Professors Richet, Vulpian and Broca who will examine the views presented by him and report upon them.

A propos of Lister, I must say, that his views in regard to the deleterious influence exerted by atmospheric air upon wounds are not shared by all European surgeons. It is true that in France M. Alphonse Guérin has proposed a method of treatment by cotton-

wool dressings which is based on the same ideas as those which have induced Professor Lister to adopt his antiseptic measures, and that a similar plan of treatment is invoked by many distinguished members of the profession ; but it is certain that these views are not universally entertained, notwithstanding the vigorous warfare which M. Pasteur has so persistently made upon vibrios *et id genus omne*. In Russia this heresy has assumed very commanding proportions as is evidenced by the fact that the Surgical Society of Moscow has publicly proclaimed its advocacy of the *open air treatment of wounds*—which, by the way, is essentially an American plan of treatment, having originated in New York. According to this report, fresh air is the purest and the surest of all the agents by which wounds can be surrounded, and vibrios exist only in the brains of those who preach them upon all the most docile and harmless of the infinitesimal creation ; whilst it proceeds even to reconcile what is known as “Lister’s treatment” with this method of aëration. Starting out with the operation that their statistics show that the treatment of wounds *without dressings* is more successful than the treatment of wounds *with dressings*, they claim that the special materials which Professor Lister employs are only advantageous, in so far as they possess properties by which the pernicious qualities of *dressings* are neutralized. All this, however, is a question of fact and not of argument—is to be settled not by assertions and inferences, but by a rigid scrutiny of the statistics furnished by the impartial and intelligent observers of all countries.

The last meeting of the Academy of Medicine was opened by the election of a member of the Superior Council of Instruction to replace the lamented Barth. Politics were unfortunately introduced into the contest, and much anxiety was felt for the result. Fortunately, however, for the interest of science, the politicians were defeated, and M. Béclard was elected by a very decided majority.

At a recent ball at the Elysée I had the pleasure of meeting my old friend and master, the great Ricord. Glittering with the decorations of every civilized court, looking nearly as young as he did twenty years since, and with a kindly smile and friendly word for every acquaintance, he commanded more respect and attention in that brilliant salon than its entire crowd of haughty magnates and scheming politicians. It was universally recognized that his patent of nobility came direct from his Maker, and that amid all the

changing scenes of his eventful career, he had remained faithful to the cause of science, to the interests of humanity and to all that is best and proudest in the character of his kind. Although Ricord still gives attention to his specialty, and is esteemed the first authority here in that regard, he has recently entered largely into general practice, and has proved himself a most able and successful physician. I had the honor of meeting him a short time since in consultation, and I was struck with the vigor of intellect, the fund of information and the clinical acumen which he brought to bear upon the case; whilst his bearing alike towards the patient and myself was the very illustration of kindness and courtesy. From his hale appearance and elastic step, I should suppose that he had still before him many years of honor and usefulness; and I sincerely hope that the results may even transcend the prognosis.

The Exposition has brought quite a number of our own medical men to Paris, and I hear of others who are *en route*. Among the most distinguished who have already honored us with a visit are Dr. John J. Crane and Professor Fordyce Barker, of New York. Although Dr. Crane has not for some years engaged in the active practice of his profession, he still enjoys to a remarkable degree the confidence of the people among whom he once so successfully labored, and is regarded by all who know him as a man of unusual force of character and as a physician of great skill and learning. His arrival in Paris was hailed with delight by scores of his former patients and his visit was made a complete ovation.

Professor Fordyce Barker is, perhaps, more esteemed in Europe than any American gynæcologist. His writings have been read with avidity abroad and have secured for him many enthusiastic friends. He is universally regarded in Europe as a most conscientious, correct and comprehensive observer, and as having played a specially conspicuous rôle in giving prestige and position to American medicine. That he may "live long and prosper" is the sincere wish of one who admires him greatly, and who feels under obligations for many kindnesses rendered upon both sides of the water.

Very truly and respectfully yours,

EDWARD WARREN, (Bey) M. D., C. M.

OUR NEW YORK LETTER.

NEW YORK LARYNGOLOGICAL SOCIETY :—*Laryngeal Phthisis, or Tuberculous Laryngitis, and is it Curable?—Iodoform in Laryngitis and in Aural Discharges; Iodoform Cotton; Solution in Ether—Dr. Wagner on Laryngeal Growths—Iridectomy Preliminary to Extraction of Cataract.* ACADEMY OF MEDICINE :—*Dr. Thomas on the Method of Reducing the Heat of Fever—Kibbes's Fever Bed—Medical Register for New York, New Jersey and Connecticut.*

46 WEST THIRTY-SIXTH STREET,
NEW YORK, July 4th, 1878.

At the meeting of the Laryngological Society, June 13th, Dr. Bosworth, the President, read a statistical paper covering twenty cases of laryngeal phthisis, treated by him, in one of which complete cure followed, and all of which with one exception, were greatly benefitted, as indicated by the local appearances; by the return of good phonation; and by a marked improvement in the general nutrition.

Laryngeal phthisis, or tubercular laryngitis, as it is commonly called, is a disease or condition which has hitherto been regarded as incurable, the very best results to be looked for extending no further than to a temporary amelioration of the local symptoms.

Dr. Bosworth's treatment consisted in topical applications of a solution of borax and carbolic acid (Dobell's formula), but principally of an ethereal solution, (40 per cent.) of iodoform, and of iodoform, morphia and tannin in powder. The results were so unusually favorable that Dr. Lefferts was disposed to call into question the accuracy of diagnosis in some of the instances. He admitted, however, that it was correct in one of the patients, a woman—who was exhibited, but was disposed to doubt it in another—a man—who likewise was examined by the members present. In this latter case there was an ulceration existing at the posterior commissure of the glottis, and unless the individual's specific and tubercular history were thoroughly known, he should incline to the belief that this case was one of tuberculous laryngitis.

When tubercles exist in the larynx, their removal was not to be looked for by any method of treatment. Inflammatory and ca-

tarrhal complications may be temporarily subdued, and ulcerations ~~may be made to heal~~, but sooner or later relapses ensue, and, finally, death, at no remote day.

Dr. Bosworth in reply (and he was supported by Dr. Duncan, who was familiar with the cases) affirmed that the diagnosis was indisputable in every instance: in that of the woman, which Dr. Lefferts had admitted to be a case of tuberculous laryngitis, from the peculiar appearance of the ary-epiglottidean fold, there were no tubercles. In fact, the expression tuberculous laryngitis should be abolished, and that of laryngeal phthisis be exclusively substituted for it, as the condition was commonly one of *wasting* of the parts, although complicated in the acute stages with inflammatory changes, but that tubercles were not visibly present. In the case of the man who, Dr. Lefferts inclined to believe, was suffering from syphilitic or catarrhal laryngitis, there was an absence of specific taint, while auscultatory examination revealed a mass of tubercle in the left pulmonary apex. In addition to this, the local appearances were those characteristic of laryngeal phthisis, viz. : a clavate shape of the epiglottis which was studded with numerous, fine, yellow points, and the well known pear-shaped swelling of the arytenoid cartilages. Their symptoms, single and aggregate, it was submitted, rendered the diagnosis in this man perfectly clear.

Dr. Ellsberg, who was elected the first President of the new National Laryngological Society, at its institution in Buffalo, during the last meeting of the American Medical Association, regarded the statistics of Dr. Bosworth's paper as replete with interest, and thought that they afforded a more hopeful view of the treatment of laryngeal phthisis. If he differed at all from the tenets of the paper it was only so far as to withhold his opinion as to the complete cure, which, for the present, must be left to him to confirm or disprove.

I must avail myself of this occasion to add my testimony to the efficacy of iodoform in the treatment of ulcerations and other morbid processes in mucous membranes. Of course, I can contribute little towards its use in laryngeal troubles, but can bear the fullest testimony, after a long experience, to its great superiority over all other agents in the treatment of chronic aural discharges. Its most effective mode of application is in substance, by means of a powder blower ; but iodoform cotton, prepared by soaking cotton-

wool in a saturated solution of the drug in ether, is scarcely less efficacious, if small dry pledgets of it be carefully inserted under a good illumination; or, as I have latterly determined in my practice, the atomization of the same solution, through a fine tube introduced well into the meatus, will produce equally good and speedy results.

All applications should, of course, be made to mucous membranes only after thorough cleansing, for if the remedy encounters a layer of mucons or pus it remains absolutely without effect. The objections to iodoform are, as is well known, its disagreeable and enduring (not disgusting, however,) odor of propylamin; but this is in a large measure removed when either of the two, and particularly the last, described method of using it is adopted. Iodoform cotton ought, in my opinion, to take higher rank in aseptic surgery than either borax or salyoilic cotton, and your correspondent will give due credit to the JOURNAL, if through its agency he succeeds in making known its value. A mixture of tannin and iodoform is recommended by some as equal in efficacy to, and less objectionable in odor than iodoform alone, but my experience with it has not led me to substitute it for the other.

Dr. Clinton Wagner (the genial host of the Society at this meeting) whom, by the way, you erroneously call Dr. *Charles* Wagner, in your May issue, read the history of eighteen cases of removal of growths from about the glottis, showing the specimens and drawings. Some of these growths were located on the under surface of the vocal cords, and were only brought into view during phonation or coughing, when many of them were adroitly seized with Mackenzie's forceps and removed.

Most of these growths were papillomata, but others were of different nature, while some (and it is very amusing to think of it) were classified under as many different heads as there were expert microscopists to whom they were submitted. One of these cases was that of a lady singer who applied because of hoarseness of the notes in the higher register. Her voice was a mezzo-soprano, but after the removal of the growth, which was a small papilloma *under* the left vocal-cord, this quality of the voice was lost, and there remained in its stead an excellent contralto. This could not be explained. There was nothing said of a change in the pitch, or quality of the speaking tones. There is a tendency now to a

subdivision of this specialty, and perhaps, at some distant day, we shall have professed hygienic, or gymnastic, laryngologists, whose province shall be to properly train the vocal cords for declamatory, reading and musical use, and this from an anatomo-physiological stand-point, and not by the purely empirical methods of the music teacher. It must not, however, be forgotten that to a music teacher and artist, Mario, we owe the existence of laryngological science.

In speaking of the removal of laryngeal growths, Dr. Wagner expressed his surprise that Lennox Browne, a physician of great experience in this line should consider it so dangerous as to render any attempt at it ordinarily unwarrantable. His own experience was to the effect that the danger was a very small one, with a competent operator.

While reporting the practice and sayings of specialists, I may allude to the custom of Dr. C. R. Agnew, of this city, in making an iridectomy preliminary to the extraction of cataract by the Graefe modified linear method. The iridectomy is made about three weeks in advance of the extraction, and is a little larger than is commonly aimed for. Dr. A. thinks much of the danger of subsequent inflammation is avoided by this method, and, as inflammation is almost the only evil which such an expert operator and master of ophthalmic science has to fear after extraction, we may expect even a further improvement in his already highly favorable statistics. Indeed, preliminary iridectomy is recommended by nearly all ophthalmists, but a difficulty is often encountered in getting patients to submit to the double operation, particularly when they have come from a distance.

The industry of Dr. T. G. Thomas is again illustrated in a long and elaborate paper, read at a late meeting of the Academy, on the "Methods of Reducing the Pyrexia of Fever." He has employed the affusion of cold water with great benefit, by means of Kibbee's fever-bed of which I furnish an illustration for your readers. The bed consists of a frame, like a common cot, having a bottom of coarse meshed cloth, made of material similar to that used by the sugar refiners for straining, only not so fine; and under this is an

India rubber cloth to catch the water as it passes through, and to conduct it to a tub conveniently placed at the foot of the bed.

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A blanket folded double is laid across the middle of the cot in order to prevent the meshed cloth cutting the patient, and over this is a sheet, folded in several thicknesses, and hanging over the sides long enough to be brought over and cover the patient's body as he lies upon it. It should be so placed as to extend from a little below the axilla to the pelvis, which includes the only part of the body to be wet.

The patient is put upon the bed with his or her night dress drawn well up under the arms, and the lower extremities covered with blankets, and hot bottles placed at the feet. The sheet upon which the water is to be poured is brought up, the two ends lapping over the trunk of the patient, and in this condition he may be allowed to remain as long as necessary—even three or four weeks. The idea is to keep the animal heat below 100° F., and water at a temperature of from 50° to 80° is poured slowly from a pitcher, upon the sheet, through which it passes over the body of the patient, and to the India rubber cloth, when it is found that the temperature is raised from 5° to 12°, according to the heat of the patient. The best temperature for the water is between 70° and 80°, but circumstances may indicate a lower or higher degree than that. It is very grateful, and the fevered patient looks with pleasing expectation to the time for the affusion. They may be made several times an hour, if necessary, but in many cases an affusion every twelve or twenty-four hours is sufficient. The patient is not disturbed for cleansing as long as he remains upon the bed, since the repeated use of the water ensures against dirt. The quantity of water to be used is a pitcher full, or more each time.

In every case of which the history was given the effect of the affusions upon the temperature was marked, and demonstrated the complete control that the attendant or nurse had over the fever.

The vast superiority of this form of hydropathy over the abominable cold pack, and even over the inconvenient and exhaustive tub-bathing and sponging, which have been so much employed in typhoid fever in Germany, must be evident. There are some reasons to believe that the pyrexia of *thoracic* inflammations are not amenable to this form of treatment.

As to the desirability of reducing the heat of fever, there can be no difference of opinion ; for although a reduction of the temperature does not remove the causes of disease, yet its maintenance for a long time tend to destroy the mass of the blood ; to dilate and paralyze the capillary system ; to impair the cerebral substance ; to weaken the heart muscle ; and to entail other pernicious consequences that oppose and delay recovery.

These beds upon which a patient may remain during the whole course of his sickness, are to be had of Messrs. Caswell, Hazard & Co., of this city, at a retail price of \$15. They ought to be kept in stock by every furniture dealer.

In Dr. Thomas' skillful hands this mode of treatment has been applied with great success in many varieties of cases, including several ovariectomies.

The *Medical Register*, of New York, New Jersey, and Connecticut, for 1878-79 has appeared as usual from the press of G. P. Putnam's Sons. It is a very valuable annual publication issued under the auspices of the New York Medico-Historical Society, being ably and faithfully compiled and edited by Dr. Wm. T. White. It contains only the names of regular practitioners, any attempt to evade the ethical code being held sufficient to exclude a name from the respectable association that the registration gives it. In fact it is (as it ought to be) a quasi certificate of good character for a man to have his name there, and the book contains many things which a christian and a doctor ought to know.

I trust the time is not far distant when some enterprising head may develop the possibility of issuing such an annual register of medical men in the two Carolinas and Georgia. With subscriptions for 500 copies, and the proceeds from forty or more advertising pages it would pay some industrious doctor (if competent) nearly as much as he gets from his practice. The *modus faciendi* can be learned from an inspection of the book, or by inquiry from Dr. White. Who will undertake it ?


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EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DEROSSET, M. D., 46 West 36th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

 *Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.*

SOUTHERN MEDICAL LITERATURE.

If the reputation of American surgical literature takes such a high place with only one half of the field explored, what must be its reputation when the surgical history of the Southern side has been written?

We believe that the time has come when this great task should be undertaken; it can hardly be considered secondary to the catalogue of the NATIONAL LIBRARY. The immensity of the work should not be a barrier to its early commencement, and its progress will be more satisfactory during the life-time of those medical men from whom the voluminous reports to be examined emanated.

The contrast between the medical and surgical management of the one army hampered for lack of supplies, and driven by necessity to invent economical methods before unheard of, could very profitably be made with the other, having at its command every needed appliance and unbounded luxuries.

Active medical men have kept themselves so aloof from politics,

and have shown such an earnest purpose of eliminating the valuable lessons taught by the late war, as far as they have ventured, that we think they may safely trust themselves in this new territory with every prospect of pursuing exclusively the scientific questions involved in the great work we suggest.

For every year of delay there must necessarily be an increased risk of destruction of the original papers, and now that there is such an able corps of assistants at work on similar matter, the commencement of this could not be more opportune.

The volumes already issued by the Surgeon-General have given American medical literature an impetus at home and a recognition abroad, which could hardly have been accomplished by any process of slow growth. Moreover, it is due to the world that something good be shown as the outcome of our wasted treasure, and in asking that this justice be done to Southern surgeons, we are also asking in the name of American medical literature.

CINCHONIA.

We have used samples of cinchonia sent us by Messrs. Powers & Weightman, of Philadelphia, with such success that we think it due them and our readers to state the fact.

Our administrations were principally to children suffering with the milder forms of spring intermittents, and we have had uniform success. In these days of dear quinine, it is well enough to know that we have such a potent substitute. It is almost tasteless, and if an acid drink is given after it rapidly dissolves in the stomach and cinchonism develops. Given with sugar of milk as suggested by Dr. Ashurst, it is easier of administration, and keeps the cinchonia in a state of fine division. We have not ventured yet to trust less than double the dose we give of quinine, but even at this rate as far as the expense is concerned, it is very trivial. We are glad to add another to our anti-malarial remedies.

THE MAY MEDICAL MEETINGS.

Summarized from the Boston Medical and Surgical Journal June 13th, 1878.

The ASSOCIATION OF AMERICAN MEDICAL COLLEGES met on the day before the meeting of the American Medical Association, June 3d, 1878, Professor Biddle presiding. Twenty-five Colleges belong to the organization. Representatives were in attendance from the Rush Medical College, Jefferson, University of Louisville, University of Nashville and Vanderbilt, University of Iowa and Michigan, Detroit Medical College, Chicago, Miami, Starling, Louisville, Missouri, Bellevue, Cleveland, and Kansas City College of Physicians and Surgeons. Harvard and the University of Pennsylvania notified the Association that they did not regard it advisable for them to enter at present. Howard University was not admitted.

Professor Flint offered a resolution that the Nashville Medical College be not recognized as long as that institution shall continue to give two graduating courses in one year, and accept three years practice in lieu of a course of lectures.

President for the ensuing year is Professor J. B. Biddle, of Philadelphia. Secretary and Treasurer, Laertes Connor, M. D.

ASSOCIATION OF MEDICAL EDITORS.

The annual meeting of this Association was held at the same time and place as the College Association. Dr. John P. Gray, Editor of the *American Journal of Insanity* presided over the meeting, and read a very valuable paper, comparing the laws of England and the State of New York on the Commitment of the insane. The methods were essentially the same in both countries; the chief responsibility of commitment must rest upon the medical profession.

Dr. Wm. Brodie, President, and Dr. F. H. Davis Secretary for the ensuing year.

TWENTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

This Association met in Buffalo on the 4th of June, 1878, and remained in session four days. The attendance of delegates was

large, 549 having registered, and a good attendance was noticed in all the sections except that on Medical Jurisprudence, Chemistry, and Psychology. The weather was clear and cool, and well adapted to enhance the pleasure of the visit and the enjoyment of the hospitalities of the citizens. Receptions were given by the Buffalo Social Club, the Academy of Fine Arts, and the Academy of Natural Sciences. A *fête champêtre* was given by B. C. Rumsey, Esq., followed by a reception by Professor James P. White on Thursday evening. The following afternoon there was a general excursion on the Canadian Southern Road to Niagara Falls, with a supper at the International Hotel. The meetings and discussions were interesting, and happily were not marred by any occurrence tending to disturb the general harmony and good feeling.

The address by the President, Dr. T. G. Richardson, was largely taken up with matter concerning the elevation of the standard of the medical education; it attracted marked attention. The President also urged, that to stimulate original investigation, annual prizes of not less than two hundred and fifty dollars should be awarded to strictly original articles.

The establishment of a National Congress of Health was strongly advocated, whose chief officer should be a member of the Cabinet of the United States. State Medical Societies were urged to continue their efforts to establish Boards of Health. Upon motion of Professor Gross, a committee was appointed to consider the recommendations of the President.

Professor Henry H. Smith, Chairman of the Section on Surgery and Anatomy, delivered the address on Surgery, taking for his topic "Certain Points in the Pathology of the Bones," in which he discussed the function of the medulla of the long bones, in the crisis of the blood and the genesis of the blood corpuscle, and the relation of the same structure to diseases of the blood, especially to tubercle.

Professor Frank H. Hamilton presented, at the request of the Section on State Medicine and Public Hygiene, on the "Intervention of Physicians in Education."

Dr. A. L. Loomis, of New York, Chairman of the Section on Practical Medicine, Materia Medica and Physiology, in a very able address considered the varieties of phthisis pulmonalis, catarrhal, fibrous, and tubercular, and reviewed the indications for the treat-

ment, recommending the establishment of sanatoria for consumptives.

Dr. James P. White offered a resolution that a committee be appointed to confer with Gen. Myer upon necessary means for recording observations on ozone, and take such other steps as may be necessary for the success of the object.

Dr. Theophilus Parvin, of Indiana, was chosen President, and the Treasurer and Secretary as last year. Assistant Secretary, Dr. Scott Todd, of Atlanta, Ga.

We notice from North Carolina the following committee appointments :

State Medicine and Public Hygiene.—Charles J. O'Hagan, M. D., Greenville, N. C.

Nominations.—Dr. Charles Duffy, Jr., Newberne, N. C.

Necrology.—N. J. Pittman, M. D., Tarborough, N. C.

Professor J. L. Cabell, of the University of Virginia, Chairman of the Section on State Medicine delivered an able address.

The Treasurer, Dr. Dunglison, reported a balance of \$2,446. An appropriation of an honorarium of seven hundred dollars was made to the permanent Secretary, Dr. Wm. B. Atkinson.

The address of Dr. Walter Kempster, of the Section on Medical Jurisprudence, Chemistry, and Psychology was chiefly devoted to the study of local tissue changes in the brain, accompanying insanity and paralysis. The conclusions of Hughlings Jackson, Ferrier, and others agreed in the main with the lesions he had discovered in such cases, favoring the view of the localization of impressions in the brain; the convolutions in the anterior or emotional part of the hemispheres he frequently found to be the site of diseases in cases of insanity.

The proposed amendment in reference to the election of officers and change of organization was laid over to the next meeting.

Professor Richardson introduced Dr. Parvin, the President elect.

The Committee on Prize Essays recommended the award of the prize to Dr. John A. Wyeth, of New York City. The Committee recommended that it should be considered as two papers instead of one. The analysis of 789 cases of operations on the carotid artery, and the careful and minute measurements of the artery and its branches in one hundred and twenty-one subjects, showing the range of variation and the per centage of the same, followed by inferences, bold and original, naturally constitutes a paper complete

in itself. Another one on the same plan, with reference to the in-nominate and subclavian, being an analysis of 300 cases, and the observation of fifty-two subjects, is presented to us in such a manner, that we may consider the whole as one prize, or they may compete for both.

The report of the Committee was adopted.

Several resolutions looking to the amendment of the Constitution went over to the next meeting.

Dr. Parvin, the President elect, was then introduced by President Richardson, and after the usual complimentary speeches, and resolution of thanks the Association adjourned.

We will make a complete review when the volume of Transactions is received.

THE FAMOUS UPAS TREE OF THE ORATORS.

The June *New Remedies* gives a cut of the Upas tree (*Antiaris toxicaria*) and puts at rest the horrid tales by Foersch the Dutch Surgeon, and takes away some of the fearfulness of the elder Darwin's lines in the "Botanic Garden." It is hard to say what simile the orators can substitute for his favorite upas. Seriously speaking though, there really exists a poisonous principle in the juice of the plant, into which the natives dip their arrows. It is called *upas* alone, or *pobon-upas*, the former being the generic name for poison. But that criminals are condemned to breathe the air polluted by the noxious emanations of the tree, and that corpses strew the ground in its neighborhood, and that no animal or plant can grow near it, is not true.

Severe effects have occurred to persons wounded climbing the trees for the flowers and branches, and this is about all of it.

Dr. Henry Jephson recently died in Leamington, England. His practice, we are told, brought him in, in one year \$120,000, and for several years it was over \$100,000.

MEDICAL ANNOTATIONS.

MEDICO-LEGAL DETECTION OF OPIUM.

In a recent case of much interest in Edinburgh, Chantrelle was arraigned for poisoning his wife with opium. The defence set up was that death was caused by coal-gas.

The points of practical interest to our readers (for which we are indebted mainly to the *Medical Times and Gazette*) are the methods employed by the experts introduced, to show the presence of opium. Upon this very ground many cases have failed, as it is an exceptional thing to find its main constituents—meconic acid and morphia in the stomach after death by that drug.

The present case may, therefore, be looked upon as a further enforcement of the law already established, that to prove death from poison it is not necessary to prove the existence of opium or any other poison in the body after death.

For almost the first time the microscope was used to detect crystals of morphia, but the idea, though considered a good one, it was rejected as an unaided test. The action of *sulpho-molybdic acid* as a test for morphia was for the first time admitted in court. This acid is made most conveniently by taking a small quantity of the molybdate of ammonium, and treating it with strong sulphuric acid. The reagent as thus prepared gives, with morphia a play of colors which ends in an intense sapphire blue. It is to be regretted that so much stress was laid upon a test which may turn out to be as fallacious as the bichromate test, which with different substances gives like reaction. The question as to whether we have any reliable test for opium, was fairly well answered, best of all by Mr. King, of Edinburgh. He said there were other substances besides meconic acid which would give a blood red color with perchloride of iron—among them saliva, (this being due to the sulpho-cyanides which saliva contains); but he was careful not to state that this color, in the case of the sulpho-cyanides, is destroyed by the chlorides of gold and mercury. It is also well known that the iodic acid test for morphia is not by itself reliable: almost any reducing agent including saliva, will set free the iodine, and so the saliva again may be said to give rise to changes supposed to be characteristic of both meconic acid and morphia, the main constituents of opium from the medico-chemical view.

The same witness proved that other substances besides morphia would give a blue with the per-chloride of iron. This, again, is perfectly well known, that any substance containing a small percentage of tannin will give a blue-black precipitate. After a close cross-examination eliciting that the bitterness of opium was a marked character; that he would not consider himself justified in declaring the presence of meconic acid, which had only been

tested by perchloride of iron producing a violet color; nor that morphia was present in substances for which he had only tested with iodic or sulpho-molybdic acids, without searching at all for the crystals of morphia; it might be mistaken for other alkaloids—such perhaps, as strychnine. Nothing that he remembered gives the bitterness of strychnine or extract of opium. The grape test with sulpho-molybdic acid, gave a sort of yellowish-green, then green, then deep blue. It is nearly the same blue to the eye as that given by treating morphia with the same acid; it might be the same chemical composition but he did not know.

He could not say from experiments that there is any one substance that will give the reaction of morphia and also of meconic acid. You may, perhaps, get a mixture, but none of the substances he had named would give both reactions. He could not tell any substance which would give all the reactions of morphia and at the same time of meconic acid. You can get one from one substance and one from another, but cannot get the whole from any one compound.

These are the most important points brought out in the examination, showing conclusively that although sulpho-molybdic acid may give some of the play of colors in the presence of some fruit juices, still it was not sufficiently well established to build up a successful line of argument. The English Journals considered the evidence of Mr. King (introduced to create a doubt as to the reliability of tests mentioned for other witnesses) was a break-down before the jury.

KOUMISS : MODE OF PREPARATION, &c.

In the *Medical and Surgical Reporter*, June 1st, we find the following for the preparation of koumiss :

“The manufacture of koumiss is a very easy and simple process. I take—

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Best unskimmed milk, qt. i.
Yeast (brewer's or old baker's) grs. c.
Cane, sugar, grs. cc.

“Keep the mixture at a temperature of 80° Fah., until fermentation is quite brisk, stirring it frequently, and then bottle, carefully securing the corks with strong twine or wire. After twenty-four hours it is fit for use.

“The object of the addition of the cane sugar is the certain induction of alcoholic fermentation. If the sugar be left out the result is likely to be that lactic fermentation only is set up, and the product is sour milk. The quantity of sugar used has, of course, to be judged by the richness of the milk and its consequent richness in fermentable constituents.”

Koumiss thus prepared, says Dr. Wm. Pepper, is a very agreeable drink, having a slightly acid taste, and containing from three to four per cent. of alcohol, one or two per cent. of lactic acid, and is highly charged with carbonic acid gas. It contains the ordinary ingredients of milk, with the exception of lactose (sugar of milk), most of which is converted into alcohol, and lactic, and carbonic acids. It should be used within a few days of its preparation, and drawn off for use by a "champagne tap." It should be kept in a cool place. Koumiss fairly represents the nutritive properties of good milk, with the addition of a mildly stimulating character. Dr. Pepper has used koumiss as an exclusive diet, and as an addition to ordinary diet. In the former cases two or three fluid ounces are given every two hours; increasing the quantity day by day until two quarts a day are taken. The high price of Koumiss has heretofore put it out of the reach of most sick people, but now it bids fair to be a cheap valuable adjunct to the dietary of the humblest patient.

Dr. Pepper narrates several cases in which koumiss has been of positive value. Its constituent nutritive elements will suggest to the practitioner the cases to which it is applicable.

THE SCIENCE OF OPTICS VS. THE ART OF PAINTING.

Six years ago a German physician, Dr. Liebreich, brought consternation into London art circles by some pathological criticisms on Turner's later works. He endeavored with lens and screen to demonstrate, that certain (assumed) peculiarities in Turner's pictures since 1831 were explainable on the theory of astigmatism in the painter's eyes. This exposure has had no appreciable effect on the market for Turners, and the cool reception which artists gave to Dr. Liebreich and his apparatus has, perhaps, deterred other scientists from revealing their secret thoughts in the picture galleries. Since then, to be sure, M. Marey's beautiful illustrations of animal locomotion have been cited in criticisms of Miss Elizabeth Thompson's "Roll Call," with the result of confirming in the main the accuracy of her drawing of a horse in motion. Mr. J. Norman Lockyer really takes up the parable of Dr. Liebreich, and confesses that he has for years been criticising the pictures in the Academy "with the most intense pleasure from the scientific point of view," but he now only ventures to free his mind publicly about them on a pretext furnished by Lord Beaconsfield. In *Nature* for May 9, he begins to pass in review to landscapes in this year's Academy, limiting himself to the sky-color as the best mode of indicating what, in his belief, "will be the influence of the study of optics in the future on art." Here it may be remarked, parenthetically, that he might have supplemented directly Dr. Liebreich's criticism of Turner, who, with all his acknowledged mastery of atmospheric

effects, was not particular whether they accorded with the time of day indicated by his favorite luminary; who would even put the rain-bow at right angles with the sun-beam, a liberty at least as great at that which Mr. Lockyer ridicules in "an eminent artist now living who had painted a rainbow practically inside out," and charged £20 for restoring it to suit the dissatisfied purchaser.—*Nation*, June 6th.

INFANTILE DIARRHŒA OF SUMMER.

Dr. C. G. Comegys gives a very favorable and encouraging account of his success in the use of cool water baths, in treating diarrhœa of infants. He uses water of the temperature of 75°, immersing the patient up to the neck, and pouring water at 65° over the scalp. He keeps the patient in the bath twelve minutes giving freely cool water for the intense thirst. In one case on withdrawing the patient he was bluish and shivering, nearly pulseless; the jaws trembled with the cold. He was wrapped, unwiped in a woollen shawl, and soon fell into a most peaceful sleep, the skin had lost its burning heat, and reâction soon set in; a healthy warmth and gentle perspiration were established, and the diarrhœa was arrested. The baths were repeated several times after this. In the meantime, quinine and whisky were given freely, also beef tea and cool milk, with addition of lime-water. Subnitrate of bismuth and pepsin mixed in powders were administered during convalescence to restrain diarrhœa, and to assist digestion, until the suffering coat of the alimentary tract should be entirely relieved. The recovery was complete. Dr. Comegys' great success induces him to recommend this line of treatment, with confidence, to the profession.

Dr. Comegys employs at once in cholera infantum a suitable hypodermic dose of morphia, and gives small and repeated doses of calomel or blue-mass to excite biliary flux. The morphine he adds will promptly arrest the vomiting and diarrhœa, but they will return with fatal effects unless the biliary dejections are established.

COLLECTANEA.

THE MICROPHONE.

This new device invented by Professor Hughes, of Kentucky, has the power of greatly increasing sonorous vibration, and of transmitting it to great distances. It is the outgrowth of the telephone,

and the *Scientific American* is inclined to believe that it is Mr. Edison's discovery by priority. The essence of the discovery made, was the property of carbon and other material under certain changed conditions, to magnify sound.

A gas-carbon pencil is attached to a sounding-board, its ends held in small carbon blocks attached to the thin sounding-board, secured to a more solid base. The blocks are connected by wires to the battery and a line wire leading to the telephone completes the arrangement.

The microphone was employed recently in London by Sir Henry Thompson, before several members of the profession, showing its efficacy in detecting the existence of stone in the bladder, however small the particle. There are so many sources of error inherent to the instrument, that Sir Henry did not seem to expect any very remarkable results from it, in ordinary practice at least.

HEALTH OF WILMINGTON.

Dr. Adam E. Wright, Superintendent of Health sends us regularly his "Table of Vital Statistics." We notice that for the month of June there were 4 deaths among the whites, and 29 deaths among the negroes. None of the deaths among the whites were incident to the season or climate, and were as follows: diphtheria, 1; apoplexy, 1; dropsy, 1; congestion, (?) 1. Among the negroes, the causes of death were, from typhoid fever, 3; marasmus, 1; drowning, 1; congestion, (?) 3; stomatitis, 4; trismus nascentium, 1; senile gangrene, 1; disease of the liver, 1; teething, 2; general debility, 3; old age, 1; making a total of 29.

Chloral and Glycerine in Constipation.—A patient of a medical friend discovers that chloral solution relieves habitual constipation. He had been injecting chloral solution 10 gr to $\frac{1}{2}$ i, with a bulb-pipette into the rectum, and externally to the anus to relieve pruritus of the parts, when he discovered that he had a prompt evacuation of the bowels. Thinking it an accident he repeated it often enough to convince himself and his physician. Dr. Hanson, of Davison's Station, Mich., uses one part of glycerine to six, eight or ten parts of warm water to produce the same effect.

Ergot in Diabetes Insipidus.—Professor DaCosta exhibited a patient on June 12th who had been passing ten pints of urine daily, the amount of fluid ingested being fully two pints less. The urine contained neither sugar nor albumen, and had a s. g. of 1,005. Drachm doses of fluid extract of ergot were given three times a day. The effect on renal secretion was to reduce its amount to five pints, then to three pints, by which time peppermint water had been substituted. During two weeks of this supplemental treatment there

was no return of this disease. Professor DaCosta has three other cures by this method, one of which was verified a year after its discharge.—*Med. and Surg. Reporter*.

[We have seen a case of the same sort yield to paregoric in drachm doses a few times a day.]

PHARMACEUTICAL NOTES.

Butyl-Chlorate (broton-chloral) seems to fall into disuse.

Arsenate of Gold.—Extraordinary powers have lately been attributed to this chemical, as a remedy in nervous affection of every variety.

Goa Powder (*Pulvis Ararobæ*).—The preparation of this powder is very distressing to the workmen; even the most careful does not escape painful inflammation of the eyes lasting one or two days.

Coca.—The difficulty of securing fine leaves continues, because the area of its growth is limited, and the natives consume the better qualities. Opinion as to its efficacy must be reserved therefore.

Coumarine.—The active principle of *Liatris odoratissima* (native vanilla, dog-tongue) and Tonka Beans, is now unproductive because an article even superior can be made starting from carbolic acid.

Pilocarpia Hydrochlorate.—Besides its well known other properties, this alkaloid salt is a very prompt myotic, and is to be preferred to *eserina*, because it does not cause inflammation of the conjunctiva, as the latter.

Benzoic Acid.—The artificial acid made from urine, commands a better price. The natural acid made from the gum is lower, which is probably due to the fact that certain varieties of Botany Bay gum (*Gummi Acroides*) are found to yield *benzoic acid*.

Sclerotic Acid.—This has been confirmed as the active principle of ergot by Professor Deragendorff, and can now be obtained at very reasonable prices in form of light brown, loose, spongy, and not

hygroscopic pieces, dried in vacuo. It is more reliable than the uncertain product sold as *ergotin*.

Antihydropin, Pulvis Taracanæ.—The powder of the Russian cock-roach (*Blatta Lapponica*), which has had so much said about it as a diuretic, has been in such demand that the supply could not keep pace with it. [If American cock-roaches would do as well, the supply might be found adequate.] New Remedies.

ORGANIZATION OF A MEDICAL SOCIETY IN ONSLOW COUNTY.

The physicians of Onslow County met at Jacksonville, July 1st, 1878, for the purpose of forming a County Medical Society.

Meeting was called to order at 11 A. M., by Dr. E. W. Ward, and, upon motion, Dr. Charles Duffy, Sr., was elected temporary Chairman, and Dr. J. L. Nicholson temporary Secretary.

On motion, the Chair was directed to appoint a committee of three to nominate a President, Vice-President, Treasurer and Secretary as permanent officers for the Society.

Committee on nominations reported the names of the following gentlemen for permanent officers :

President—Dr. Charles Duffy, Sr.

Vice-President—Dr. E. W. Ward.

Treasurer—Dr. W. D. McMillan.

Secretary—Dr. J. Lloyd Nicholson.

Motion made and carried that the President appoint a committee of three, to draft for this Society, a Constitution and By-Laws (which shall not disagree with Constitution and By-Laws of State Medical Society) with instruction to submit the same to the Society at the next meeting.

Drs. C. Thompson, M. C. Hoytt and Wm. D. McMillan were appointed as the committee.

The roll of members contains the following names : Drs. Chas. Duffy, Sr., E. W. Ward, M. C. Hoytt, W. J. Mumford, Wm. D. McMillan, C. Thompson, Chas. Lessesne and J. L. Nicholson.

On motion, it was voted that Secretary send the Minutes of this meeting to NORTH CAROLINA MEDICAL JOURNAL with request to publish.

Society adjourned to meet at Jacksonville on the 5th of August next.

CHARLES DUFFY, SR., M. D., President.

J. LLOYD NICHOLSON, M. D., Secretary.

NEW HINTS ON THE TREATMENT FOR BITE OF THE POISONOUS SPIDER AND SNAKE.

Dr. W. A. Simmons, of Troy, Montgomery County, N. C., gives us some useful hints on what he thinks a new treatment, and that it will be very useful to country practitioners, as he has found nothing in text-books to give satisfaction to one desiring to know how to treat the bites of venomous snakes and spiders.

“Mrs. G—, aged about 37, was pulling fodder barefooted and felt a sting on top of her foot, leaving a small red spot, and looking down saw a small black spider with a white face, and mashed it against a rock. In a few minutes she became delirious and remained so from that time, about 2 or 3 o'clock in the evening, till 11 o'clock that night. I first saw her at 7 o'clock and she had drunk a pint and a half of strong brandy which I thought was a plenty, and gave her a large dose of spirits of ammonia without making any alteration in the symptoms. At 11 o'clock I poured a drachm of chloroform over the region of her heart and held my handkerchief on it to prevent its evaporation, and to my gratification and astonishment her delirium and heart pain disappeared at once, and she took up her child and suckled it, and I left her with nothing worse than a red spot the size of my hand where she was burnt by the chloroform.

“There was no swelling at the place bitten or anywhere upon her leg when I first saw her at 7 o'clock, but the poison appeared to have entered the circulation and was causing such agony as I am not able to describe. The delirium was certainly greater than we ever see in snake bite after the use of the same amount of alcoholic stimulants.

“The poison of the rattlesnake's pilot and cotton mouth moccasin, and I believe all other serpents of this class behave very much

alike in producing speedy general sedation and local mortification sufficient in some cases to cause death, but if not followed by speedy reäction and diffuse local inflammation, spreading from the place bitten and diffuse local inflammation of the whole of the tissues of the body as the poison gradually reaches them.

“The poison of the spider, on the contrary, produces no local mortification or inflammation at the place bitten, no speedy reäction and no sign of redness, pain or swelling at the place bitten ; but is taken immediately into the circulation producing death, sometimes.

“Although treatment at the time was accidental, I have since considered it of sufficient importance to give it to the profession, and those who differ with me I would be glad to hear from them through your JOURNAL.”

TROMMER'S MALT.

[*From Ziemssen's Cyclopædia of the Practice of Medicine, Vol. XVI, page 474.*]

“The Malt Extract prepared from Trommer's receipt is designed to fulfil much the same purpose as Cod-liver oil, carbo-hydrates (malt sugar, dextrin,) taking the place of fatty matter. The simple (much or little hopped) and the Chalybeate form of Malt Extract are coming more and more into favor as substitutes for the oil ; they are more palatable and more easily digested, and should, therefore, be preferred in the dyspeptic forms of anæmia. During the last few years Malt Extract has almost entirely taken the place of Cod Liver Oil in the treatment of phthisis, and other wasting diseases at the Basle hospital, and we have as yet found no reason for returning to the use of the latter remedy. The Extract may be given from one to three times a day in doses varying from a teaspoonful to a tablespoonful in milk, broth, beer, or wine.”

SEVEN SPRINGS IRON AND ALUM MASS IN TREATMENT OF HÆMATURIA AND UTERINE HÆMORRHAGES.

Dr. Wm. White, of Abingdon, sends us a paper with the above

title on the therapeutic effects of an admirable preparation much in its favor.

February 3d, 1876, was called to see R. C., a bright mulatto woman, the mother of seven living children, the eldest 23 years of age. The history of this patient was one of continuous suffering, subject, as she stated she had been for years, to many afflictions. At this time she was pregnant, but had aborted twice within the last three years. I found her to be of spare habit—a dyspeptic, very feeble, and much emaciated, but little appetite, constipated, frequent vomiting, violent attacks of headache. Pulse 100, and at intervals she had severe pain in the lower portion of the bowels which extended upwards along the crests of the ilium, in front of and around the navel through to the smaller part of the back. This pain being always accompanied with a desire to pass water.

The day I first saw her, she had considerable hemorrhages—unusual pain in the lower portion of the bowels, a constant desire to get up and pass water, with faintness and vomiting.

Thinking she was threatened with a miscarriage, as she was again pregnant, I examined her and found the os slightly dilated and not at all patulous. The hemorrhage continuing and upon a more careful examination finding that it did not come from the uterus I passed a medium sized gum catheter into the bladder, and although carefully and gently pushing it along the urethral tract it gave rise to considerable pain. The hemorrhage continuing I withdrew the wire and there was a continuous flow of blood through the catheter accompanied with pain, severe vomiting and faintness. I at once resorted to hypodermic injection of ergotine, repeating in one and a half hours, and to eight grain doses of quinia to be taken at intervals of three hours. Ordered that the quinia should be continued until bed time, and a morphia powder to be taken at that time to relieve pain and produce sleep.

I called to see her again the next day, and learned that she had rested quite well during the night. The pain though not so severe as it was the preceding day was still severe, the vomiting less, the headache, faintness and hemorrhage continuing although not to so great an extent.

From this time, for twenty-five days, the symptoms were almost identical to those last described with the exception of the hemorrhage, which was less after having resorted to lithia water, root of rhatany, gallic acid, quinia, uva ursi, kino buchu, catechu, acetate of lead, occasionally extract of ergot. Saline cathartics were given every third day with morphia each night to produce sleep. Her diet was Valentine's meat juice, alternated with extract of malt, and articles of food, such as were easily digestible, and free as far as could be from anything calculated to excite the dyspeptic symptoms. Regarding the case as one of hæmaturia, my efforts were directed to the objects of relieving pain, and, if possible, to remove the cause of the affection.

I have already outlined the treatment pursued for several weeks

but finding these remedies not to answer as speedily as possible the objects desired, I decided to make a change, try the Seven Springs Iron and Alum Mass, which remedy had proved efficacious in my hands, for other affections as reported.

For a few days after she had commenced the use of the mass I could discover but little change, but on the tenth day after using it, I found the urine had become less bloody, there was less desire to micturate, appetite better, vomiting not so frequent, and in fact, I thought my patient had considerably improved. By continuing the mass during the day and an anodyne occasionally at night, good nourishment; good nursing; the patient gained rapidly in health; went to her full term; and gave birth to a well developed living child. She recovered rapidly from this confinement.

In a little over a year after this I was called to see the same patient who was again complaining of almost the same symptoms as she had done previously—hemorrhage, vomiting, pain, faintness. &c. She was at once put upon the Seven Springs mass, believing *post hoc ergo propter hoc*. With good nursing; good diet, she recovered rapidly, and in three months from the time I again saw her, she gave birth to another living child.

I will state *pari passu* that I have used with benefit in several cases of diseases of the urinary organs, lithia water and the other remedies mentioned, but have found none of them to equal the water and mass of the Seven Springs in the treatment of these affections. It will be observed that in giving a statement of the case, I have avoided purposely, many details which were of interest to me, as the physician. * * * * *

In warm, southern climates I am sure that the water and mass from the SEVEN SPRINGS will prove invaluable. The analysis alone will indicate its efficacy in the treatment of females, to which may be added the experience of physicians from every part of the country. For its tonic, alterative diuretic and diaphoretic properties, it is almost unequalled. The ingredients are readily absorbed, thus reaching every tissue—modifying in some manner every secreting process of the body. The liver, and pancreas, and various glands—the pelvic viscera, the skin all become impregnated with these diffusive ingredients, thus keeping up a constantly alterative process in addition to slight purgation—improving all assimilating functions, building up and giving tone to the muscular and nervous system. Sometimes it is thought by the physician that certain mineral waters are injurious to females during pregnancy, in consequence of some of the ingredients found in an analysis. It is not the case with this. * * * * *

I can only ask in conclusion, that some of the medical profession in the South will try the water and the mass, not only in the treatment of such cases as the one here reported, but in others of acute and chronic character, as I feel assured they will be satisfied as to the efficacy of each or of both.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

A RARE CASE OF *ELEPHANTIASIS (?) OF THE PENIS— REMARKS ON THE MANAGEMENT OF THE URETHRA IN AMPUTATION OF THE PENIS.

BY F. DUFFY, M. D., Newbern, N. C.

Patient a robust white man, æt. 47 years, consulted me about the middle of January, 1876, on account of a swelling of his penis, which he said commenced to make its appearance about three

*The amputated penis referred to in this article was exhibited before the Pathological Society of Philadelphia, in October, 1876. It was referred to a committee for examination, but I have never had any report from it since, although, I wrote a letter of inquiry. By request, I wrote and sent to the Society, the above report—just as it now is, with the exceptions that in this report it is stated that the patient was a white man, which is usually taken for granted when not otherwise stated, and in one place retract is put in place of contract. I heard nothing from the morbid specimen or my report of the case, until I saw in the Southern Med. Record, February 20th, 1878, Atlanta, Ga., an extract from the Philadelphia Medical Times, 1876, in which the important details of the case are omitted, and a number of erroneous statements are made, as may be seen by comparing the extract with this report.

An eminent surgeon of Philadelphia, in my presence, after a hasty examination pronounced the specimen cancerous. Another surgeon wrote me that he had examined it with the microscope and that he considered it elephantiasis. He had not received any report from the committee. In Newbern, some of the surgeons considered it cancer and others elephantiasis.

weeks previous to that time. He lived in the country and in order to evacuate his bowels had gone in the woods where his genital organs had come in contact with some bushes or grass. This was only a coincidence, but at first it was thought probable that there might be some connection between this circumstance and the swelling of the penis, as some venemous insect might have inflicted a wound which did not at first attract attention. Patient said that a red spot first appeared on the glans—this was attended with some itching and stinging sensations, and simultaneously the whole organ began to enlarge and steadily increase in size until he consulted me, when it was about six inches in circumference at the largest point which was about midway the corpora cavernosa. The organ had very much the appearance of a very large physiologically—erect penis with the exception of the slight bulging in the centre, and perfect flaccidity at the root. It was red and hard, except at the edges of the retracted prepuce were œdematous and pitted on pressure. At this time there were no ulcerations or abrasions of the skin anywhere. In the right groin a gland was enlarged to about the size of a walnut. Soon afterwards, the glands on the left side became involved. The penis and neighboring glands continued, in spite of every expedient, to enlarge in size until the skin was about to burst; having already in the course of three or four weeks from the time it was first seen by me, begun to ulcerate from undue tension. I decided to make two lateral incisions along the penis down to the corpora. This being done the organ seemed to reduce a little in size, the venous oozing was considerable and some arterial branches required torsion. Its appearance was now quadrilateral from gaping of the wounds which showed no tendency to heal but required constant applications of disinfectants to prevent ulceration and sloughing which processes would occasionally open small blood-vessels and cause troublesome hæmorrhage. Amputation was advised but the patient was slow in assenting to it, until the penis measured twelve inches in circumference, and the glands in the groins were as large as a man's fist.

About the middle of March amputation was performed with the galvano-cautery, Byrne's battery being used. To get all the diseased tissue, the wire loop was pushed close down to the root and part of the scrotal skin included. The operation was not bloodless as it was intended to have been, on account of tightening the wire

a little too fast; an artery required a ligature and some other bleeding points were touched with the actual cautery. For several days after the operation, the urine had to be voided by a catheter—the patient had some enlargement of the prostate gland, but up to this time had no difficulty in emptying his bladder except as a scale which was easily removed would form on the slightly ulcerated meatus urinarius. The stump was a broad open wound which granulated and healed slowly, while the glands continued to enlarge and the patient to become more and more emaciated. I now tried electrolysis on the enlarged glands—being assisted by Dr. Attmore, whose Drescher's battery we used with a power varying from twelve to twenty cells, and at first twice a week—then at intervals of a week and longer. The needle was attached to the negative pole and inserted well into the gland, usually through the centre, while the positive pole was placed at a short distance from the gland,—sometimes shifted on it. The current was continued twenty and thirty minutes at a time—sometimes causing considerable burning pain. Several weeks after the last electrolysis the glands were fully as large as ever. They were, before the electrolysis, somewhat soft and doughy to the touch, the skin being bluish and thin, we thought that at first they were somewhat liquified by the current, but were not certain of it. In the right side extending from the enlarged glands to about the pubic symphysis and into the edge of the wound, was a hard ridge as large or larger than a man's thumb.

About the middle of April I was taken sick and lost sight of the patient until early in June, when I was requested to visit him at his home in the country—to which he had removed during my illness. I found him expiring and emaciated to the last degree. The wound left by the amputation had entirely healed, and strange to say the enlarged glands had entirely disappeared—neither was there any denuded or ulcerated surface or enlarged glands anywhere to be found. The emaciation was so extreme that the anterior abdominal wall seemed to rest on the vertebræ which could be felt distinctly. Any lumps in the abdominal cavity must have been felt if present. In the centre of his forehead there had appeared a small elevation like an exostosis. His attendants had not noticed that the glands were disappearing until about one week before his death—the increasing emaciation must have made them appear more prominent,

even if they were slowly decreasing in size. The patient for a long time had eaten but little, although I had laid great stress on the necessity of nourishment. For one or two weeks before his death, I was informed that he had eaten almost nothing. Two or three days before death, he began to have diarrhoea, passing dark, tarry discharges in bed. His skin was very harsh and dry. Altogether, death seemed to result from starvation. The temperature was habitually above the normal—being about 100° and 101° . Once a slight attack of pleuritis complicated his case, and on several occasions he had malarial chills. At such times he had considerable fever; pain was never a prominent symptom; the diseased organ was sensitive to the touch and its great weight rendered much care necessary in handling and supporting it, but when comfortably dressed and supported it was usually free from pain. There was no history of any hereditary or diathetic diseases in the patient's family. His own health was habitually good. He had never had any venereal disease; was married and of very correct habits.

Iodide and bromide of potassium were for a while freely given in this case. Tinct. muriate of iron was administered three times a day and quinine given as there seemed to be any indication. As a local application, carbolic acid seemed preferable to salicylic acid, possessing anæsthetic as well as disinfecting properties. After trial of various articles, carbolic lotion, iodoform in powder or mixed with calomel were determined to be the most comfortable and efficacious dressings. It is very remarkable that the diseased glands and all other external appearances of disease in the case should have vanished notwithstanding the fatal termination. There is no question as to the neoplastic nature of the penis and neighboring glands. The products and appearances of simple inflammation are widely different from what has been described. If electrolysis caused the dispersion of the glands it was a long time after the last operation before there was any perceptible diminution. It is possible that they may have been starved out as the body became more and more emaciated, and smaller blood-vessels became obliterated, and the calibre of larger ones diminished. In the meantime, as the softer and more watery tissues of the body were absorbed—the more vital parts, as it were, feeding on the less vital, these glands may have been decomposed and absorbed. The electrolysis may have left the glands in a more fit condition for this result. Death

of the patient may have resulted from slow starvation without any anatomical lesion which was necessarily fatal. Or the lymphatic system may have been so diseased as to lead to this result necessarily.

It is worthy of note that after the amputation of the penis the urethra was not stitched back, nor was any means employed to prevent its retraction which seems unnecessary, where the amputation is done with the galvano-cautery. Having consulted a number of standard works on surgery, I have not found the galvano-cautery recommended, except by Bryant—he, however, advises the stitching back of the urethra after the amputation. This would seem to be unnecessary for two reasons: 1st. The albumen of the tissue is coagulated by the white, hot wire and the urethra and surrounding parts, agglutinated together so that no retraction can occur before cicatrization has taken place, at least, in some degree. 2nd. The wire can be so manipulated as to make the urethra the highest part of the stump. Where a part is amputated the wire invariably has a tendency to work upward toward the distal extremity, so that the amputated part (neck of the wound for instance) has a base in appearance like an inverted cone. If in amputation of the penis the traction on the hot wire is made from the dorsum toward the urethra, a little dexterity (provided the situation of the urethra is borne in mind) can make the urethral orifice the highest point. The result in the above, justified the experiment. Although the organ was extremely large and vascular, the operation might have been entirely bloodless but for a little too much haste. It is proper to state, that the opinion of my brother, Dr. Charles Duffy, based on his experience in the amputation of the cervix uteri, led to the trial by me, of the above experiment in omitting to stitch back the urethra.

NOTE.—Since writing the above I have had three other amputations of the penis, but no other opportunity of repeating the above experiment on the urethra—as in every case the urethra was destroyed below, or on a level with the point of amputation.

University of Virginia.—We notice among the graduates of the Medical Department of the University from North Carolina, Drs. S. B. Jones, Charlotte; H. W. Lilly, Fayetteville.

DIPHTHERIA.

Read before the Medical Society of North Carolina at its Twenty-Fifth Annual Meeting, Goldsborough, N. C., May 15th, 1878.

By J. K. HALL, M. D., Greensborough, N. C.

Diphtheria is an acute disease, which is characterized by membranous exudation on some mucous membrane, generally on the tonsils or pharynx. Diphtheria is a disease of very great antiquity, even as remote as the days of Augustus. We have evidence of the prevalence of an affection, described by Aretus, a Greek physician, possessing all the essential characteristics of this disease. In the 16th and 17th centuries, we have every reason to believe that diphtheria prevailed in many parts of the world under different names, descriptions of which, are sufficiently accurate to leave no doubt of its identity. But it is probable that other diseases were included in these descriptions, and no accurate account of this disease had been given until 1821, by Bretonnean, by whom the name diphtheria was given to it.

During the past century this disease has been investigated both in Europe and this country, where extensive epidemics have prevailed, and every opportunity afforded for viewing it under almost every conceivable circumstance; yet as regards the cause, nature, or pathology of the affection, there seems to be nothing definitely settled. Ordinarily, in my experience, diphtheria is ushered in by a fever of more or less severity. Sometimes preceded by a chill more or less marked, accompanied with pain in the back and limbs, with headache, and a stiffness and soreness of the muscles of the neck, and some tenderness of the cervical glands. In a short time, a very few hours, the exudation commences, generally on a tonsil, or on one or both half arches, uvula, or pharynx. The mucous membrane of the part affected is reddened and somewhat swelled. This exudation in mild cases may remain stationary and gradually pass off; sometimes separating and coming off in considerable pieces, sometimes by absorption. In the more severe cases, however, the patches of membrane spread from one or several centres until the entire mucous membrane of the fauces is involved; may extend into the posterior and anterior nares, the eustachian tubes, the œsophagus, and larynx. I do not wish to be understood

as saying that the effusion spreads from the tonsils or its primary seat; but that the different parts are consecutively involved; in fact I have seen the membrane disappear entirely from the tonsils and fauces, and the larynx become involved, and death follow in a short time. The exudation when first thrown out is thin, but soon becomes thick; and is generally white or yellowish at first, but frequently becomes a brown color resembling sometimes wet tow, and is frequently an eighth of an inch thick. Soreness of the throat is not ordinarily a very prominent symptom; deglutition is seldom very difficult or painful. Swelling of the sub-maxillary glands is in some cases very extensive, generally corresponding to and commensurate with the extent of the local affection. The fever seldom continues with any marked severity longer than from twenty-four to thirty-six hours, after which the skin shows little, if any increase of heat—in fact, in some cases the skin is generally too cool. It has appeared to me that the violent constitutional symptoms subside or moderate upon the supervention of the local effusion; which goes to establish the fact, that the local affection is not the cause, but the mere expression or symptoms of the constitutional disease. The parts connected with the throat are not the only parts that may be affected by the effusion. The external ear, the vulva; a case of which I treated—the local disease first appearing in the vulva extending over the pubes; attacking the fauces; two weeks afterwards extending into the larynx and ending fatally in a short time.

The appearance of the skin is very characteristic in bad cases of this disease; presenting a peculiarly, dusky, ashy or cyanotic hue. I have never observed any characteristic eruption; we occasionally have petchiæ and vibices though very seldom. The pulse is very variable in different cases and even in the same case; sometimes it is very frequent, but often it is but moderately accelerated, and generally rather feeble and compressible.

Hemorrhage from the nose is sometimes a very troublesome and grave symptom; cases occasionally occur in which there is a general hemorrhagic tendency from all the mucous membranes. When the larynx becomes involved, we have all the symptoms of true croup, which is, according to my experience, the most dangerous of all conditions. The appetite is generally very much impaired, or, may be wholly lost; and all food may be loathed. An irritable stomach frequently exists, but not by any means, generally.

THE CONDITION OF THE URINE.

There can be no doubt but albumen exists in a great many cases; my opportunities for making observations on this point have been limited, but according to some observers it occurs as high as in 50 or 60 per cent. It occurred in all the cases observed by Sanderson. Generally the quantity is small, but sometimes very great. It is supposed that the quantity depends upon the extent of the diphtheritic effusion, and the swelling of the sub-maxillary glands, and the surrounding tissues. "It has been considered as evidence of commencing septicæmia." The sequelæ of diphtheria are peculiar and characteristic.

General anemia and debility accompanied with great feebleness of the heart's action may continue for weeks, after all appearance of the local affection has subsided. I witnessed a fatal syncope in a case of this kind; the subject, a girl twelve years of age, who, upon making a slight exertion, fell instantly dead.

Paralysis affecting the palatine muscles, tongue, and pharynx is a common sequel. Any portion of the system is liable to be affected by paralysis, but generally the lower extremities are most liable. I have seen but one case where the paralysis was general, which was accompanied with blindness continuing for six months, the paralysis continuing for more than a year. The duration of the disease is from six to fifteen days.

DIFFERENTIAL DIAGNOSIS.

From the ordinary inflammation of the tonsils and pharynx, it differs, in the fact that there is an effusion of lymph in diphtheria, and by the painful deglutition accompanying those affections.

It is true, in pharyngitis, the surface is partially covered with a tenacious mucus, which may present some of the appearance of membrane, but it may be easily removed, showing its true nature. It is frequently the case that the tonsils in an inflamed state are studded over with yellowish spots, round or oblong, which have no doubt, often been mistaken for diphtheria, but they do not coalesce as in diphtheria, are confined to the tonsils, and when closely examined are found to be true ulcers; whereas in diphtheria there is no ulceration. From membranous croup, it is to be distinguished by the fact that croup is a disease of the larynx, purely local, without the peculiar symptoms of diphtheria. There is no swelling of

the sub-maxillary glands in croup. In diphtheria, as a rule, the upper part of the throat is involved and it may extend no farther, the larynx becoming affected secondarily, if at all; whereas, in membranous croup, if the fauces are affected at all, it is after the affection of the larynx; and I can conceive of no likelihood of the disease being mistaken one for the other, unless the larynx should be the first seat of invasion of diphtheria, an instance of which I have never witnessed.

From scarlet fever it differs, in the absence of the characteristic eruption, in the time the albuminaria appears, in one being a concomitant, while in the other it is a sequel. Scarlet fever producing an exemption from a recurrence of the disease, whereas, an attack of diphtheria affords no immunity from other attacks, but rather increases the susceptibility. It is true, that you may have a diphtheritic exudation in scarlet fever, but it is less tenacious and I have never known it attack the air passages. Besides, we have diphtheria intercurrent with typhoid fever, pneumonia, measles, and other diseases. An epidemic of typhoid fever once fell under my observation, in which a large majority of the cases presented this symptom, it appeared on all blistered surfaces so that that remedy could not be used. Surely it cannot be said that the diseases are identical. Abscess of the sub-maxillary glands is frequent in scarlet fever, which I have never known in diphtheria.

What is the nature of diphtheria?

By some it is believed to be a constitutional disease, primarily a blood poison, the local manifestation being a mere expression of a morbid condition of the system.

Others hold that diphtheria is purely a local affection; the system becoming affected secondarily from the local disease. This opinion is held by most European authorities at the present time. This theory is held from the discovery of bacteria on the effused membrane, and in the surrounding fluids, which are supposed to be infecting agents, both locally and constitutionally.

On the other hand, it is contended that bacteriae are not uniformly found on the exudation of diphtheria and that numerous attempts to propagate the disease by inoculation have failed.

My own opinion is, that diphtheria is a constitutional disease. The constitutional symptoms in my experience, have always preceded the local affection, at the same time I believe, that the local

affection may be reabsorbed and the system affected with septic poison in consequence, and I believe I have seen many cases affected by diphtheritic poison which were not accompanied by the local effusion.

Is the disease infectious ?

It is believed by many to be caused by contagious or infectious miasm; I have not had any satisfactory proof of it. On the contrary, the disease as it has prevailed in my county has been in a certain sense both epidemic and endemic, affecting a single family here and there, who had no connection with each other, and in no instance has there been any satisfactory proof of its propagation by contagion. The most malignant case I have seen for the past year was confined to a small room for two weeks, with five other persons, none of whom took the disease.

The experiments made by Trousseau and Peter to produce the disease by inoculation failed. Peter applied lint to the throat saturated with diphtheritic matter, without producing any effect. The recurrence of diphtheria the second time, or repeatedly, is evidence that it is not infectious. Infectious diseases never, or exceptionally occurring the second time. Regarding the question as unsettled, I uniformly use every precaution to prevent exposure.

PROGNOSIS :—Diphtheria is always a very dangerous disease, even the mildest cases sometimes terminating unfavorably. The most serious condition is where the larynx becomes involved, and I have not known a single death in my county where the larynx was not involved. When the disease attacks the posterior and anterior nares it is unfavorable. Very great swelling of the sub-maxillary glands and cellular tissue is a dangerous symptom and indicates an absorption of the poisonous matter from the throat. Hemorrhage from the nose, throat and mouth, is a bad symptom. Inability to take nourishment, with nausea, vomiting and diarrhoea are unfavorable symptoms.

TREATMENT :—This may be divided into general and local.

In my opinion there is no specific remedy for this disease. It should be treated according to the pathological condition. Ordinarily by sustaining the system while the disease runs its course, and by such remedies as tend to prevent reinfection from the local effusion and septic poison. It is my habit when called to an ordinary case of diphtheria to give a purgative dose of calomel, to be

succeeded by a dose of sulphate of magnesia, unless the bowels are moved freely. Without waiting for the operation of the purgative, however, give of a saturated solution of chlorate of potassa a tablespoonful every two hours, and a tablespoonful of chlorine water every alternate hour, or a saturated solution of chlorate of potassa in chlorine water, a tablespoonful every two hours with ten grains of sulphur every alternate hour—day and night for the first twenty-four hours, by which time ordinarily, the intervals can be made longer. In conjunction with these remedies after the paroxysm of fever is over, give quinine in tonic doses together with a nourishing diet, and stimulants if necessary.

A great many cases will do well without any other treatment. There are many cases that do not require tonics or stimulants, and I have been governed in their use by the same principles as in other diseases of an asthenic character. Of this class of remedies alcoholic stimulants are to be preferred, and should be given in two grain doses every two hours, except in cases complicated with remittent fever, when it should be given in larger doses. Six or eight grains, repeated as the case may require. My experience with iron in this disease has been unsatisfactory. I am not conscious of having derived any benefit from the use of it, except in the treatment of the sequelæ.

I do not think there is any known remedy that exercises such a controlling influence over the diphtheritic condition as the chlorate of potassa with chlorine water; it appears to act both generally and topically. Generally by supplying oxygen to the blood and destroying bacteria and locally by causing the separation of the deposit from the mucous membrane. In cases of great anorexia, with vomiting, the indications are to sustain the system by every possible means, stimulating enemata by the skin, by stimulating friction, and baths. As to local treatment I do not consider it of much importance,—only avoid doing too much. I am confident I have seen harm result from too frequent attempts at local applications. I have long since abandoned them with infants, or where you have to use force. Of the great variety of remedies used for local application, perhaps, sulphurous acid is to be preferred. The throat should be enveloped in flannel and rubbed twice a day with oil turpentine or some stimulating liniment. When the larynx becomes involved, the general treatment should be the same as the above, together

with such local measures as tend to promote the separation of the membrane. The neck should be kept enveloped in flannel, or a warm poultice, and the atmosphere of the room should be kept charged with vapor, by means of a boiling vessel so constructed as to throw off as much steam as possible. The temperature of the room should be kept uniformly at 85° or 90°, at the same time R. Carbolic acid, 3 ss. ; Lime water, ʒ viii. ; this to be thrown into the air passages five or six times a day by means of an atomizer ; the spray should be warm. The sequelæ of diphtheria, although apparently serious, have always yielded to suitable remedies, a tonic, invigorating treatment, with good diet, is indicated. A combination of iron, quinine and strychnia, has a fine effect in these cases.

VALEDICTORY ADDRESS DELIVERED BY ROBERT L.
PAYNE, M. D., PRESIDENT OF THE MEDICAL SOCI-
ETY OF NORTH CAROLINA.

Gentlemen of the Medical Society of North Carolina:

Following in the footsteps of my honored and illustrious predecessors, it now devolves upon me to attempt the performance of the last duty which custom demands of me, before giving place to my distinguished and worthy successor.

Could I tell you of something “new under the sun ;” some new advance in science, some great discovery in “our divine art,” or, could I ever suggest a new field for thought and deep research, I should feel amply repaid for any effort it might cost me ; but as I am not prepared to entertain you now in any such manner, I must ask you to be content to follow me along an old and beaten pathway, worn by the footprints of many a weary traveler ; a pathway which goes onward into the unknown future, and leads backward through the dim ages of the past, even to those primeval days when Jacob, son of Isaac kept and led old Laban’s flocks amidst the luxuriant pastures, and beside the rippling waters of the land of Padan-aram.

Your attention, then, is respectfully invited to a consideration of the following subject :

INFLUENCES WHICH ACT UPON THE CHILD BEFORE BIRTH.

I believe that the physical, mental and moral condition of the whole human family, has been in a great measure determined by influences which have been brought to bear upon them through their parents before they were born, and I am as fully persuaded that the weal or woe of the unborn millions yet to come, will depend in a most eminent degree upon the same causes.

Nearly fifteen hundred years before the Christian era, the Great Physician gave us through his servant Moses, what may be called the law of inheritance ; which reads as follows : “ for I, the Lord thy God am a jealous God visiting the iniquities of the fathers upon the third and fourth generation of them that hate me ; and showing mercy unto thousands of them that love me and keep my commandments.”

For three thousand three hundred and sixty odd years this declaration of the Almighty has been in force, and now every honest, candid, observant physician must see, and acknowledge that it underlies many of the very fundamental truths of medicine, but more especially that portion of the science of medicine which relates to the subject of inheritance.

Most assuredly the consequences of a man's good deeds, as well as of his sins live after him—live in his children, and his children's children to remotest generations ; so that viewed in the light of truth, we can safely say, that virtue, temperance, morality and religion, are the very essentials, the very foundation stones, upon which rest individual, and national prosperity, and on the other hand, alas ; it is equally true that the lusts, the unbridled passions, and the sinful habits of the people are more potent factors in the decay, and downfall of individuals ; and of nations, than are invading armies, or “ the pestilence that walketh in darkness, and the destruction that wasteth at noon-day.”

There is no fact better established in medicine than the truth, that a very large number of diseases are transmitted from fathers and mothers to their children.

Syphilis, consumption, scrofula, cancer, and gout ; diseases of the heart ; diseases of the nervous system, as insanity, apoplexy, epilepsy, paralysis, and many other ills which might be mentioned

are more frequently inherited, than are houses and lands or gold and silver.

And there are some strange and inexplicable facts connected with this subject of transmission by inheritance. Sometimes it is not direct, as from parent to child ; it may seem to skip a generation, or it may come indirectly from an uncle, or an aunt, or there may have been no signs of it except in a grand-parent, or even some more remote ancestor.

Not only are the evil effects of our own sins and bad habits, transmitted to our immediate offspring; but millions of the human family are to-day suffering in consequence of the indiscretions of their forefathers.

That the sins of the fathers are in many instances, visited upon the children, even unto the third and fourth generation, no sane physician can deny, who has had any experience in the treatment of many of the above named diseases.

For example, we again call to your minds that horrible malady, syphilis, and the legion of ills which flow from it. Many a syphilitic father begets a child with "rottenness in its bones," and many a poor child whose parents are good and virtuous, and apparently healthy ; inherits its puny frame, and feeble vital energy, from some remote ancestor, who, having ignored the virtuous claims of chaste Diana, became a devotee at the voluptuous shrine of the wanton Venus.

Thus, this insidious disease pursues its baneful way from father to son, from grand-parent to grand-child, from generation to generation, and from nation to nation, until there are few, if any left, who are absolutely free from contamination, absolutely pure in blood. Alas ! alas !! it is too often true, that the great shield of Minerva, and the silver crescent of Diana, both fall powerless before the witching wiles of Venus, and the fiery darts of Cupid ; but although stolen waters may be sweet, and bread eaten in secret may be pleasant, the penalty is sure to come, in the way of physical, intellectual or moral degeneracy, either to the guilty parties, or to their descendants.

As the insatiate eagle forever preyed upon the liver of old Prometheus, so this hydra-headed monster syphilis with its many tongues is lapping up the very life blood of the nations of the earth, and yet, there are some who still cry down all those legal measures,

which so far from "legalizing crime," are well calculated to aid true religion, and sound morality, in arresting its loathsome progress.

There are many other hereditary diseases which do not, necessarily, follow as the legitimate consequences of a dissolute life; for instance, a hysterical mother may transmit hysteria to her daughters, so also with other diseases of the nervous system, etc., etc.

My own father, and my grandfather died from paralysis following apoplexy, and the dim shadowy spectre of apoplexy follows constantly at my heels ever and anon whispering the death dirge in my ears, and ever ready to seize upon my vitals.

But, in addition to the hereditary diseases which affect the child before its birth, there are other causes or evil habits, which leave an unmistakable idea upon it.

For example, the confirmed opium eater may be emasculated by the habit, but if by chance a feeble virility remains, and children are born to him, such children are almost sure to be weak and defective, either in body or in mind, and very frequently in both. In like manner, the man whose system is enervated by the excessive use of tobacco, if he becomes a father at all, he is nine times out of ten, father to a puny offspring, and it not uncommonly happens that the wives of such men abort in almost every pregnancy.

The fondness for ardent spirits is often hereditary. The children of drunkards are not only inclined to dipsomania, but also to other forms of insanity, and many a poor idiot upon whose dull consciousness the glorious sun of reason never shines, or, if it shines at all, shines with dimmest ray, was made what he is, by the mental state of a drunken father, at the time he was begotten.

If these be the effects upon the child when evil habits are carried to excess, what will be the results of the same vices when indulged in to any extent? Must they not have a decided influence in the same direction, only to a more limited degree? I think such are clearly the teachings of physiology and pathology, and accord well with our every day experience; and I verily believe, that every evil habit, or vicious course of conduct which is indulged in by parents, leaves its blasting impress upon their children, or their descendants, an indelible blemish which like some "damned spot" will never, never "out."

Oh, how repugnant to the better feelings of every true man,

should be every course of conduct, or sinful habit, which will entail misery, disease, and untimely death upon his offspring !

Not only are diseases and vices inherited, but the tastes, the disposition, the temperament, the tone of voice, the color of the skin, and eyes, and hair; the form, both of feature and figure, the peculiar personal appearance, the characteristic step, and general bearing of a man are often left as legacies to his children.

It is said that even the years of our lives are in a great measure numbered by those of our parents. I know a gentleman, whose name I need not mention, whose great grand-father had dark hair, whose grand-father had red hair, whose father's hair was dark, whose own hair is red, whose son's hair is dark, and who confidently expects some day to have a red haired grand-son.

Peculiar mental and moral qualities are very frequently transmitted by inheritance. No idiot ever begot a Webster or Clay, and no wicked silly woman ever bore a Washington or a Lee ; consequently the surest way to perpetuate talent, is for intellectual men to intermarry with intellectual women, and the most promising mode of promoting moral, and physical perfection, is for men sound and healthy in both respects, to unite in wedlock with women equally excellent.

The relation between mind and body is so very intimate that when one suffers the other sympathizes, consequently for the sake of coming generations, it is all-important to preserve both in the best state of health, since it is true that the intelligence, the morality, and even the religion of a man, is many times biased by the condition of his stomach.

It is said that a man most frequently inherits the mental calibre of his mother, and that the daughter takes after the father, nevertheless, it is true, that a father often transmits his talent to his sons.

Napheys says : " that talent is often the offspring of talent is shown by the two Herschels, the two Colemans, the two Coleridges, the two Sheridans, the two Montesquieus, the two Pitts, the two Foxes, the two Scalagers, the three Adams, the Kemble family, etc., etc."

Many other such instances might be cited, and a goodly number of them even in our own State as the two Phillips, the three Bingham, and others outside, and some even in the ranks of our noble old profession ; but the above is sufficient for our purpose.

Certainly the general rule is, that a son is most likely to inherit his mother's mental qualities, hence, the greater necessity for well selected marriages, yet no foolish fellow need hope by marrying an intelligent woman to become the father of a statesman; but he may hope to have sons, whose intellectual powers may be much above his own low level.

Deformities of person, both natural and accidental are sometimes handed down from parent to child.

I knew a dashing cross-eyed young Lothario of rakish proclivities who became the father of numerous illegitimate children, and in nearly every instance these children were afflicted with strabismus.

A woman of my acquaintance, has a thumb and five fingers on each hand, and several of her sons are similarly deformed.

A case is recorded in Taylor's Medical Jurisprudence of a man who had a thumb and five fingers on both hands, and who was compelled to support an illegitimate child which was sworn to him, and who had one of its hands deformed in the same manner.

A neighbor of mine owned a small female terrier that had lost her tail close up to her body. She had several litters of puppies after her tail had been amputated, and a number of them had no more sign of a tail than the mother had.

Another neighbor owned a cur dog whose tail had been cut off within two inches of his body; this dog became the sire of numerous stump-tailed curs.

Physiologically and pathologically, these last two cases are good illustrations of the hereditary transmission of artificial defects, and if I were disposed to pun, I should say were practical demonstrations of the full meaning of the word—*curtailing*, and are suggestive of the idea, that if Darwin's theory be true, man may have lost his original caudal appendage by some similar casualty.

I find the following in the *Medical and Surgical Reporter*: "Dr. Ledwick writes to the *British Medical Journal* there are many cases on record in which acquired peculiarities, or defects have been hereditarily transmitted by the human family." He cites many cases, and among others a case observed by Blumenbach in which a man whose little finger of the right hand had been nearly demolished, and set awry, had several sons, all of whom had the little

finger of the right hand crooked; and also a case observed by M. Geschreift at the eye institution in Brussels of two brothers, microphthalmic on the left side, whose father had lost his left eye fifteen years before his marriage.

G. L. Durans cited the following case to illustrate Brown-Séguard's observations respecting the hereditary transmission of acquired epilepsy :

“ A man who was not born epileptic shattered the dorsal vertebra in falling from the top of an oak ; the result of this accident was a spasmodic contraction of the limbs which lasted for years, and was not perfectly cured when he married ; his son on attaining the age of puberty, became epileptic.”

Dr. Brown-Séguard has noticed a change in the shape of the ears, and dry gangrene of the ears ; partial closure of the eyelids, exophthalmia, absence of toes, morbid state of the skin, and hair, etc., etc., in animals born of parents in which injuries have been inflicted upon the nerves supplying the parts named.

We have many evidences of the fact, that the tendency to crime is transmitted.

I call your attention to the following remarkable instances collected by Napheys.

“ Alexander the VI, and his children the Borgias will ever live upon the pages of history because of their atrocities. The crimes of the Farnese family are too infamous for mention. The same taint of wickedness runs through the cruel nature of the Medici, and the Vicontes, the latter of whom are accredited with the invention of the forty days torture. Sextus VI, and his children were notorious for their crimes, and to the Condé family have been attributed in addition to their courage, and brilliant intellect, odious vices of character, malignity, avarice, tyranny and insolence.”

Dr. Harris, of New York, gives a most striking example of the hereditary tendency to crime. He says : “ in substance, that about seventy years before he wrote, a girl with no name but that of Margaret, was found in a certain county in New York State. She was a homeless vagrant. There being no alms-house in the county, she lived upon the charities of the public, without education, or any other civilizing influence. She bore children, who like herself grew up vagrants and paupers, and now there are said to be

nine hundred of her descendants living, of whom two hundred are criminals, and an additional large number who are lunatics, idiots, and drunkards.

Byron owed much of his evil nature, and unhappy disposition to "an unhappy tempered mother."

But it is a cause for much thankfulness that the good as well as the evil qualities of parents are transmissible. Goethe is said to have inherited his good parts from his mother. Milton's mother was a woman of incomparable virtue and goodness. Napoleon's mother was noted not only for her beauty, but also for her "remarkable firmness of character.

An eminent writer says ; "I know two young sisters, opposite as the poles in their tendencies, and dispositions. One is impatient, fretful, revengeful, and seldom satisfied with anything or person around her. The other is in every way kind, gentle and loving in her nature. Before the birth of the first, the parents were laboring under pecuniary anxieties and suffering wrongs that filled them with irritation and impatience. Before the birth of the second sister, these unhappy influences had passed away, the mother was calm and loving.

I know a boy who was begotten when his father was in Lee's army, and at a time when his father's mind and body both were harrassed and impressed by the excitement, the vicissitudes, and hardships of the last few months of the war. His mother's mind, too, was kept all the while in an anxious and restless state. That boy is as wild as the horse Mazeppa rode, unruly as a grizzly bear, unstable as the wind, and ruthless as the God of War himself.

Another son was born to these parents since the war, and this one is

" Full of all gentleness, of calmest hope,
Of sweet, and quiet joy,"

the very opposite of his elder brother in every respect.

It is a fact admitted by all breeders of horses, that the colts from thoroughly broken horses, are more readily broken than the colts from horses that have had no training ; and every sportsman will tell you that the puppy from a well trained pointer or setter dog is more easily managed than the puppies from untrained dogs.

The talent for music is nearly always transmitted.

It is said that Mozart's mother was passionately fond of music before his birth, and Beethoven's grand-mother was an excellent musician. From John Sebastian Bach have descended a long line of excellent performers and composers.

It is true, that fathers and mothers who have no "music in their souls," and are never "moved with concord of sweet sounds," bear children upon whose dull ears the harmony of song is forever lost.

Please excuse me for alluding to my own in this connection, but this fondness for music has been notably apparent in my own family for generations past, and although it has never by any means culminated in genius. If I ever live to see one of my descendants who cannot turn a tune at three years of age, if I am not skeptical, I shall at least suppose that the child has by *atavism* inherited from ancestors more remote than my own knowledge goes.

Having very imperfectly endeavored to show to what an extent children are affected for good or evil, by the subtle power of hereditary influences, I come now to consider more especially, impressions which are made upon the child while in the womb, and which are conveyed to it, through the mind of the mother.

With regard to this division of my subject, the medical profession at large are more skeptical, but I here declare that I am a firm believer not only in all the influences which have been already mentioned as affecting the child, but I believe fully in "mother's marks."

I believe that the mother's mental, moral and physical state, not only at the time of conception, but before it, and during her pregnancy, exerts a most powerful influence over the child not merely while in the womb, but as a necessary consequence throughout the whole of its after life, and will often produce not only visible marks upon its body, but will leave indelible impressions upon its mental, moral and spiritual nature.

There is not a fact, or even the germ of a principle, taught or suggested in God's Holy Word that is not true! Now, when Jacob of old was herdsman of Laban's flocks God Almighty made him the demonstrator of a physiological truth, which I believe to be as true as any other fact now taught in modern works; and if I had no other proof of the truth of "mother's marks" than this, I should still believe in the theory; and if I had no other reason I

should believe it, simply because I find it taught in the Book of Books.

After Jacob had prepared ring-streaked, speckled and spotted rods, he placed them in such a position as to attract the attention, and make an impression ; placed them before the eyes of the flocks.

“ And the flocks conceived before the rods, and brought forth cattle ring-streaked, speckled and spotted.

This is the first case on record, in which we have demonstrated the truth of the theory, that the mental impressions of the mother will produce marks or impressions upon the offspring ; but since those days thousands upon thousands of cases have accumulated to prove the theory true, until now the best physiologists either acknowledge it or hesitate to deny it.

Carpenter in his article on the nervous system, says : “ In the same category too, may be placed those instances wherein a strong and persistent impression upon the mind of the mother, has appeared to produce a corresponding effect upon the development of the foetus in utero. In this case the effect must be produced upon the maternal blood, and transmitted through it to the foetus ; since there is no nervous communication between the parent and offspring.” And he adds, “ There is another class of facts which seems referable to the same category, that, namely, which exhibits the influence of a male parent upon the subsequent offspring of a different parentage ; as in the well known case of the transmission of the Quagga-marks to a succession of colts, both, whose parents were of the species horse ; the mare having been once impregnated by the Quagga male, and in the not unfrequent occurrence of a similar phenomenon in the human species, as when a widow who marries a second time bears children strongly resembling her first husband.”

In view of the above facts, gentlemen, is it any wonder that Sam Weller said to his son—“ my son, beware of widows.”

I have often heard it said by old horse-breeders that a horse colt, following a mule colt is almost sure to partake of the qualities of the ass.

Again, Carpenter says : “ It is well known to breeders of animals, that a strong mental impression made upon the female by a particular male will give the offspring a resemblance to him, even though she has had no sexual intercourse with him.” I have no

doubt of this ; and I am certainly of the opinion, that if a woman unfortunately, ardently and tenderly loves some other man more than she does her husband, and keeps and cherishes his image constantly in her mind during her pregnancy, her child will most likely resemble the man she loves more than it will its real father, although there has been no wrong committed by overt act ; and I have no doubt that many a poor erring woman has on this account alone been accused of a want of virtue ; whose chastity so far as deeds are concerned, has ever remained as pure and spotless as the white pinions of an angel. I have no doubt, too, that many an innocent man has suffered from the same mysterious cause !

Dalton says : “ There is little room for doubt, that various deformities and deficiencies of the foetus, conformable to the popular belief, originate in certain cases from nervous impressions, such as disgust, fear or anger experienced by the mother ; ” and at another time, he states that the “ wife of the janitor of the College of Physicians and Surgeons during her pregnancy, dreamed that she saw a man that had lost a part of the ear ; when her child was born a portion of one ear was deficient, and the organ was exactly like the defective ear she had seen in her dream, ” and he also says : “ That among the lower animals when a female has successive litters of young by different males, the young of the second litter may have marks more alike those of the first male, than the second. ”

Flint says : “ It has long been a question whether impressions made upon the nervous system of the mother, can exert an influence over the foetus in utero. While many authors admit that violent emotions experienced by the mother, may affect the nutrition and general development of the foetus, some writers of high authority deny that the imagination can have any influence in producing deformities: * * * * * still there are cases which cannot be doubted, but which in the present state of our knowledge of development, and the connection between the mother and the foetus, we cannot attempt to explain. ”

In another place he tells us that “ a woman may have by a second husband, children who resemble a former husband, and this is particularly well marked in certain instances by the color of the hair and eyes. ”

Carpenter, as before quoted, says the same thing and so do many other physiologists.

I know of two such instances myself in which children by a second husband have resembled the first husband even to the color of the hair, and eyes, and skin.

Hammond relates a case occurring in his own practice "in which a woman after seeing a ghastly wound upon the face of her husband gave birth to a child with a dark red mark upon the face corresponding exactly in situation and extent to the wound upon the father's face."

In the Journal of Psychological Medicine the same author expresses this opinion: "But the instances of a decided influence exerted through the medium of the maternal mind upon the foetus in utero, are too numerous for us to disregard them and most physiologists of the present day, admit the existence of this relation, without hesitation, although they differ in regard to its character and extent."

"Malebranche has assigned the greatest scope of imagination to women under such circumstances; he mentions one who having been present at the breaking of a criminal on the wheel, gave birth to a child whose limbs were broken at the exact places where those of the criminal were fractured."

Millingen says: "I know a lady who during her pregnancy was struck with the unpleasant view of leeches applied to a relative's foot. Her child was born with the mark of a leech coiled up in the act of suction on the identical spot."

"A black child is generally believed to have been born to Marie Thérèse, the wife of Louis XIV., in consequence of a little negro page in her service having started from her hiding place and stumbled over her dress early in pregnancy."

A black child was born to a white married woman in my county, and she accounted to her husband for its very dusky hue by assuring him that she had been terribly frightened by a negro man who presented himself before her in a half-nude state. The husband was satisfied and is still happy.

Professor Smith, of New York, has seen several instances of deformity in children following upon strong mental impressions which have been made upon the mind of the mother, and Carpenter men-

tions a remarkable case which happened in a family connected with himself.

At the meeting of the British Medical Association not long since "Dr. Goyder stated that he had formerly been opposed to the influence of maternal impressions, until a circumstance in his own experience led to changing his opinion. He amputated the finger of a man, whose daughter then one month pregnant, assisted at the operation. She expressed at the time great abhorrence. On her confinement the corresponding finger was absent in the child. Dr. Drury mentioned a similar case, where a patient four months pregnant, when larking with her husband let fall the lid of the flour-bin on her thumb. When the child was born the thumb was hanging by a thin piece of skin."

I find in the February number of the *Virginia Medical Monthly* for 1876, a very excellent and very convincing paper, by Dr. L. S. Joynes, on the "Effect of Mental Impressions," etc., etc., in which he cites a large number of interesting cases.

At the same time Dr. J. B. McCaw, reported several cases, one of which, coming as it did, under his own observation, is of so much interest that I shall use it here. The doctor vaccinated a pregnant lady at the insertion of the deltoid muscle of the left arm; she fainted at the time of the operation, and he says: "when the child was born, there was found upon the left arm, at the insertion of the deltoid, red multiple cross marks, in all respects like those made upon the mother." Dr. L. B. Edwards also mentioned this interesting case which is to the point: "A farmer was whipping an unruly servant girl, when his wife, who was pregnant, and whose sympathies had been enlisted, rushed into the room to intercede for the girl. She saw the stripes made by the whip upon the girl's shoulder. * * * * * When she was confined, her infant exhibited marks upon her shoulders corresponding to those witnessed by the mother on the negro.

Respectfully asking a continuance of your patience and attention, I will now relate a number of cases, and for the truth of a majority of them I can myself vouch.

Some years ago a lady came over to this country from England. She was then in the early months of pregnancy, and was visiting a family who were residing some distance in the country. Soon after her arrival, she ardently desired, even longed for a glass of

porter. Her husband ever willing and anxious to gratify her, made repeated ineffectual efforts to procure it. In the meanwhile, the lady felt as if she would almost give her life for a bottle of porter. At length, a small quantity was procured from a village some twenty miles distant.

The bottle was opened, and a glass of its contents handed to the lady. In her eagerness to get it, the glass was overturned in her lap and ran down through her clothing upon her left lower extremity.

The lady was terribly disappointed, broke into a flood of tears, and was disconsolate until more porter was procured. In due time, she gave birth to a fine daughter, and that daughter has to this day, a mark upon her left lower extremity, just the color of porter, and which both mother and daughter speak of as the "mark of the porter."

Not long since I was called upon to visit a little daughter of a Mrs. S——. I was struck with the strange appearance of the child. One of her eyes was dark and the other blue; on one side of her head the hair was dark, and on the other side of a light flaxen color. I asked the mother if she could account for it, and this was her reply: "Why, certainly, I can do so; when I was in the family way with her I was terribly frightened by a fierce dog; this dog was black upon one side of his head, and white upon the other, and had one dark eye and one glass eye. I was very much alarmed by his attack upon me, and all through my pregnancy I feared that my child might be marked."

Just after the surrender, and before Kilpatrick's troops were removed from my county, a great many poor, and worn out horses were sold at public auction in my town. A gentleman of my acquaintance bought a very poor horse with an ugly saddle-sore upon his back. He took this horse home, and told his wife that she might have him if she would see that he was well cared for and fattened.

His wife, who was in the early months of pregnancy, attended to the sore herself, because she feared that no one else would wash and dress it properly. She was very much interested in the treatment of this sore as long as she could attend to it herself, and after she could not do so, she was still anxious upon the subject. After awhile her child was born with an ugly place upon its back;

a regular spina bifida, in a position on the child, corresponding exactly with the position of the sore on the back of the horse.

My father owned a negro woman, who, in one of her pregnancies, became enamored with another negro woman by the name of Jennie. No one could do anything to please her but Jennie ; no one could cook to suit her but Jennie ; in truth, they became inseparable friends, and whenever it was possible, they arranged their business so as to be together. She seemed perfectly infatuated with Jennie. When her child came, it was unlike any other member of the family, and was a diminutive fac-simile of old Jennie, and the likeness is still strongly marked even though young Jennie is now an old woman.

In my county, a drunken husband came home one day and found the well-bucket detached from the rope, and down in the well. He became very much enraged at the circumstance, and in his blind fury he forced his poor wife, who was pregnant, to go down into the well upon the rocks and fasten the bucket to the rope. Of course, she was greatly alarmed by the hazardous undertaking, and a few months afterward, gave birth to an unfortunate child, who grew up a poor driveling idiot.

This may have resulted from the mother's fright, or may have been dependent upon the habitual drunken condition of the brutal father.

I happened to be upon one occasion in the office of a physician in eastern North Carolina, and seeing a monster preserved in a bottle of alcohol, I said to the physician, why, doctor, this is a turtle; and he then told me that he delivered the monster, and that before it was uncovered, and before he had seen it, the mother asked him if it was not like a turtle ; and went on to say that she had been frightened by seeing a large sea turtle some months before her confinement.

My brother, the Rev. C. M. Payne, M. D., saw a poor idiot in the western portion of the State, whose skin is rough and scaly, somewhat like the skin of a snake, his tongue is cleft to the end, reminding one of the forked tongue of a serpent, and he never attempts to talk, but hisses constantly. His mother accounts for his condition by the fact that while pregnant with him, she was dreadfully frightened by suddenly coming upon a huge snake.

A doctor of my county took his wife, who was pregnant, to see

the plays of a travelling company of theatrical performers. Among the actors was a dwarf, who was not only hideously deformed by nature, but was also artificially disfigured. The lady was both frightened and disgusted by his appearance ; and several times before her confinement, she expressed the fear that her child would be deformed. Sure enough, when it was born it was a frightful monster.

A case of this kind occurred when I was a college boy which made a lasting impression upon me.

A circus company came along and had with them a beautiful mare, heavy with foal. The mare, owing to her condition, could not do what was required of her; and, in consequence was beaten with a long whip until she was literally covered with marks. A gentleman living at the College, purchased the mare, and when the colt was foaled, it had marks upon its body which led every one when they first saw it, to suppose that it had been recently beaten with a whip.

It is said to be a fact, too, that a white woman, who has borne children by a negro, may afterwards have children by a white man, and these children may present unmistakable marks of the negro.

The very fact of the prevalence of a strong belief in "maternal impressions" among the women themselves, although, not a positive proof of its truth, is, at least, a forcible presumptive evidence in its favor.

Now, if all these things be true, and if it be a fact, that joy, grief, fear, anger and other emotional causes may produce abortion, does it require any great stretch of the imagination to believe fully in maternal impressions, even though with our present knowledge, we cannot understand the cause? I think not! In the dispensation of the Almighty there are a great many things which poor finite man can never fully explain or understand. Perhaps this is one of them.

Upon the subject of natural impressions, Dr. Combe says: "If a sudden and powerful emotion of her own mind exerts such an influence upon her stomach as to excite vomiting, and upon her heart as almost to arrest its motion, and induce fainting, can we believe that it will have no affect upon her womb, and the fragile being contained in it?"

Thus, gentlemen, I might go on adducing evidence, and multiplying instances of the effect of mental impressions upon the fœtus in utero, from sources which cannot be doubted, but I will not, as I am already consuming too much of your time.

However, there is one fact more which I will mention in connection with this subject. It is this. Almost all persons remind us of, and do really resemble some one of the lower animals. Some men remind us of the lion, some look like a bull dog or a mastiff, or a rat-terrier, and some even resemble a cat or a rat. Some look like a crane, others like an eagle, while others have the features of a monkey or baboon. Others are proud of their likeness to the gorilla. Again some have the exact expression of a sheep, and alas, some remind us forcibly of the ass !

May not this be due in some measure to the mental impressions which have been made upon the minds of mothers, or must we take it only as another evidence of the truth of Darwin's theory, and another proof of the particular stock from which we sprung. But all jesting aside, there must be truth in these things ! As surely as I am standing here to-day, so surely impressions for good or ill are made upon the fœtus in utero which shall affect it throughout all time, and are commensurate with eternity itself ! The physical, mental and moral state of a man is begun before, and during the time he is in his mother's womb.

God only knows when his education does really begin ; perhaps, in the womb too ; at any rate, influences which shall in a great measure shape his whole future destiny, begin, and are impressed upon him at the time of his conception and before his birth.

How important is it then that every person should know the full meaning and importance of these truths, so as to be better able to guard against the evils which flow from a dissolute life, and a disregard of the commands of the Great Creator ; and so as the better to war against transmitting the defects of their own physical, mental and moral constitutions. And how superlatively important is it to future generations that pregnant females should cherish and cultivate all the finer feelings, the nobler impulses, and the more exalted aspirations of their natures !

How all important is it that they shall know what momentous issues for weal or woe to their unborn children hang upon themselves !

If I could surround every pregnant woman with every means calculated to add to her comfort and enjoyment, I would do so.

I would make for her an earthly elysium. I would make for her again, an earthly Eden, and I would encompass her with every attraction calculated in any manner to elevate, ennoble and beautify. And I would warn her, too, of ever danger that might blight or mar her unborn child—the forming casket of an immortal soul. I would build for her a palace fair like that by the lake Como, where

“ The perfumed light
Stole through the mists of alabaster lamps.
And every air was heavy with the sighs
Of orange groves, and music from sweet lutes,
And murmurs of low fountains that gush forth
In the midst of roses.”

But few, very few of the women of the land can be so well cared for; however, it is the bounden duty of every one to make them as happy and comfortable as possible while pregnant.

And there are duties in connection with this matter, which belong especially to our profession, and which we cannot escape or disregard. On this, and kindred subjects we are the teachers, the educators of the people. In the very nature of the case it must be so; because no one else can give such lessons here as we are bound to give; nor is this kind of instruction looked for and expected from any other profession or calling but ours.

Let us then look well to our duty! I have often thought that the responsibilities resting upon physicians and ministers of the gospel were in many respects identical.

The disciples of both professions *must be teachers*, and the grand aim of both in this particular, are to be dispensers of the truth—that truth which is as eternal as the years of God!

The great line of duty with the one, although differing in many respects from the other, runs parallel with it, and methinks the influences exerted by neither, end with time; but cross the flood at death, and are blended eternally with the seraphic anthems of Saints and Angels in the Better Land, or are commingled forever and forever with the groans and curses of the damned in hell!

Gentlemen, again, I thank you for the honor done me; for the attention given me to-day, and for the unvarying courtesies shown me during my term of office.

And now, I must bid a last, long, lingering farewell to that office which your partiality gave me, and which I have held so pleasantly !

But not farewell to you, fellow-members ! I am with you still ! with you heart and hand as a co-worker for the general good of our noble old profession, or for the special welfare of this, our loved association, and whenever the time shall come when by reason of age, infirmities, or for any other cause I cannot be with you in person, my spirit shall linger near you, and my heart shall pray, and my lips shall utter a God speed for the North Carolina Medical Society !

CINCHONA VERSUS TOBACCO.

Read before the Medical Society and Board of Health, of Duplin County.

By J. H. HICKS, M. D., Faison, N. C.

The apparent change in types of disease is due to the habits and customs of people. From these habits, whether good or bad, result malignancy or not, in most diseases. In all ages man has been addicted to such habits as make the greatest impression on the nervous centres. Medicines, whose effects control the nervous system, are quickly observed by the populace and wonderfully mastered. Like many others, in the case of the two that head this article, their evil effects are not understood by them, and ere long the evil train of their effects (angina pectoris for instance) are told to their physician as if nature had been false to their especial economy.

Malarial districts, especially, are hot beds for the production of many diseases among our unfortunate fellow beings ; but amid all the reverses that have baffled our people for the last fifteen years, none compare with the ravaging effects of these habits and customs, which should be pointed out by those who know better. I was lead to think of, and attempt to write about these medicines, as every day in my rounds I witness quinia and tobacco on every mantel ; in fact, so great is the use of the preparations of cinchona that it now comprises a great part. even. of their veterinary med-

icines. There has been such an indiscriminate use of the drug as to be one great cause of its scarcity or high price. That same feeling that makes the physician at a loss when he goes out without his cinchona, has taken hold of the people to a great extent. They look only at its well known anti-malarial effect, when really with the addition of their bosom friend, tobacco, they carry the fatal upas, whose impress, though not immediate dissolution, produces depression so great that every principle of cherished worth is lost with many, making grovelling beings with grovelling minds. Statesmen may speak of financial prosperity, but the physician must tell the mental and physical state ; must by the familiarity with the laws of nature and the consequences of their misapplication, not only teach that bad habits beget disease, but that they elucidate that degeneracy which the theory of "Development by Selection" would have us believe were consistent with the laws of creation. Among the many contributions on *quinia* of late, its effects as a sedative and relaxant have not been sufficiently detailed. For instance, I have never seen it stated that quinia administered in parturition without the addition of morphia causes excessive post partum hemorrhage, thereby aiding, if not in many instances causing the terrible ravages of the lying-in. I must, to particularly introduce this point, and in order to show its importance, read a short, but impressive note from Dr. Thomas, of Pembroke, Ky. You remember that quinia as an oxytoxic was at one time much mooted until Dr. Thomas' article on the same was published. This seemed satisfactory to my mind with one exception, and this note I read is in reply to one calling his attention to this point. I read it in part, gentlemen, because it is more expressive and better calculated to show this importance than anything I could say. It is this : " I sincerely thank you doctor for this point, and since you have called my attention to it, now, remember, having witnessed such effects and should I have occasion to write on the subject again, will elaborate this very important idea in connection with the effects of quinia in the puerperal woman. Would be glad to hear from you on this subject again, as I consider it of sufficient importance to enlist our best investigation. I well remember the impression made upon myself when I first saw that simple quinia would meet the indications in irregular labor pains. I felt that I had a harmless nerve to meet the anxious supplications of the lying-in, as well as

being a mental agent for myself, as this would act as a substitute for, probably, the unwelcome advice, "this pain, Madam, is your inheritance and you must be patient." I was taught the indications for ergot in such a manner as to give me a holy horror of the drug, requiring as it does almost absolute experience for its administration. I felt unharnessed by this too great relaxing effect of quinia, but thanks to progressive medicine I soon learned that morphia would counteract this effect, thereby still relieving me of prescribing other anodynes, as morphia alone, so constipating in its effects. To enter into the results of *post partum* hemorrhages, would be but a synopsis of the most trying maladies with which the physician has to contend, and which is already told in unmistakable language.

That depression of the vital forces so often seen in malarial districts can be as much ascribed to the indiscriminate use of quinia, mercury and tobacco, as to malaria itself. A noble work is here for State Medicine to point out the true enemies to our physical welfare. The follies from the cradle, with opium; to old age, with bad whiskey, should be taught by such sanitary regulations as belong to the province of this body and enforced as far as possible by proper legislation. Now, can be bestowed that work of charity consistent only with our profession. The originators of State Medicine, are, indeed, public benefactors, for they have opened the channel through which nature's laws and domestic medication can steer without the aid of so many nostrums, so powerful in their effects. Indeed, I find that the best way of combatting these nostrums is by acknowledging their power and stating the consequences of their misapplication. They are often prescriptions from our best medical minds, patented by some hospital attendant. They often bring a patient to a physician's office, when without them, he would have found his trouble visionary or due to some noxious habit that he could have easily abandoned, at least, to an injurious extent. For instance, I think that the majority of my office patients are those whose systems are shattered from an excessive use of tobacco. One, I remember, on whom I so completely impressed the danger of its noxious effects, that he immediately abandoned its use. This patient had used it excessively for many years. I neglected to state to him that a moderate indulgence would be necessary to enable him to entirely give up its use. So great was the reaction that he

considered that I knew nothing of his trouble, applied elsewhere, was told that he had valvular disease and was prescribed digitalis.

This failed to relieve him, and he applied to me again. I found on closer examination as I first thought, simple functional derangement, explained to him his trouble; applied a belladonna plaster, allowed tobacco moderately, gave him the strychnia pill and he is now better, and I believe will recover. The effects of immoderate use of tobacco are not sufficiently taught by the profession. Smoking rooms must not be made nurseries, and stomachs must not be made apothecary shops, for functional derangement caused by habits that proper professional advice would cause to be abandoned, at least, to an injurious extent. Dr. Pepper in his excellent clinics, scarcely ever failed to impress his opinions of tobacco. I remember one patient affected with dyspepsia from its use. He asked the patient how much he daily used. The patient held up two fingers as indicating the quantity. The doctor, with that peculiar emphasis, when speaking of tobacco, stated to the class, "that, gentlemen, is equal to a stream of poison as long as from here to the wall." Pepper in his opposition to tobacco was as notorious as Wood in his advocacy of turpentine. When we consider the deleterious effects of adulterated tobacco and whiskey, the revenue act might well be brought in question as to whether other articles of consumption could not be substituted and thereby be more conducive to the physical welfare of the people. Kept as they are within the reach of all for the sake of revenue, they bankrupt the individual both financially and physically, making them a pestilence outstripping any conceivable epidemic. The grasp after the mighty dollar applies to nations as well as to individuals. It makes the financial prosper at too great an expense of the physical, and is one argument in proof "that mankind is weak and little to be trusted." In this connection, I might add that some of our law makers might profit by the example of Jonadab of old, who taught that bad habits and customs under a religious economy, lead straight on to arguments for false doctrine, heresy and schism, and bad habits and customs under a political economy, lead straight on to arguments for sedition, privy conspiracy and rebellion. His allusions were in reference to wine only, and had he lived now he would have plead for a "counterblast" that King James himself would have quailed before. We are told that tobacco, the king of all evils in our section

or State, was first found in Tropical America and introduced into England by Sir Walter Raleigh. Nicotine, its active principle, is regarded as one of the most virulent poisons known in its effects upon the animal system. A drop of it in a state of concentrated solution was sufficient to destroy a dog. Though containing as it does, this active element, we are told that when moderately taken it quiets restlessness, calms mental and corporeal inquietude and produces a state of general languor and repose which has great charms for those habituated to its impressions ; but when taken excessively it enfeebles digestion, produces emaciation and general debility, and lays the foundation for serious nervous maladies. Hypertrophy, fatty degeneration and cardiac dropsy, that we so frequently meet with now are most all the result of functional derangements caused from the excessive use of tobacco, and no doubt tubercle is often developed where only a depressing agent is required. Now, tobacco, like most evils, has its rewards. Certain temperaments are benefitted by its use, for instance, I have known an attack of hysteria to be completely thwarted by its effects and believe that its sedative effect on the nervous system would indicate its use daily by such temperaments. The history of tobacco has produced much curious literature. Bulwer wrote, that it makes man think like a sage and act like a Samaritan. He thought it ripened the heart; Bulwer was an enthusiast. Sir Charles Lamb wrote, "For thy sake, tobacco, I would do anything but die."

Sir Charles Lamb was a maniac and no doubt tobacco was a good remedial agent for him. What should be impressed, is the fact that it does not, as the vender has it, "make Gods of kings, and meaner creatures, kings," but is highly useful when kept within the bounds of a remedial agent. Tobacco, in excess, is not mentally in contrast with its effects physically, for while it produces lethargy on the part of the physical, it creates impulsive activity on the part of the mental and in this way does its part in shaping the character of a people much addicted to its use. It is said that it makes the French more gay, the Spaniards more grave, it is even supposed to be the cause of German scepticism. It is said that the Turks have sunk under its enervating influence, while upon our own people a writer expresses its effects as increasing the mental activity at the expense of the physical frame. It is stripping our men of all corporeal weight and leaving them like over-strained steeds to fly across.

not travel the field of life. The rising generation is attenuated, the jaws are shrinking up and crowding the teeth, but the imagination is expanded and self-confidence knows no bounds. Particularly is this attenuation marked in the female sex. Their sedentary lives allow complete saturation and tobacco as a defibrinator is better marked in their sallow skins, while their now marked like endurance in that trying ordeal of giving birth, shows attenuation to that extent that but few require aid in placental delivery, if you come within the prescribed limits for its removal. "Dyspepsia with its attendants, ænemia, vertigo, lowered vitality and enfeebled circulation, as a result of snuff-taking, are first steps to softening of the brain and general paralysis."

In view of this physical degeneracy, State Medicine should show that climatic influences are not altogether responsible for that loss of vitality so marked upon certain classes in our eastern sections. Tobacco, quinia, blue mass and bad whiskey, each in excess, would rank this influence, while collectively they would throw the theory of malignant fever in darkness and cause us to wonder at the powers of the human frame. With the present attitude of science sanitary laws and dietetic preparations, many an evil inheritance would soon disappear if the curse of tobacco, in excess, was properly impressed upon the people. As Dr. Gross aptly remarks in his article on syphilis in relation to the natural health, it is high time that the people should be enlightened upon what is daily transpiring in their midst and imperceptibly sapping the very foundation of Society.

INTRA-LARYNGEAL GROWTHS.

BY CLINTON WAGNER, M. D., New York.

Physician to the Metropolitan Throat Hospital—Fellow of the
New York Academy of Medicine—Fellow of the
American Laryngological Society, etc., etc.

The following cases of intra-laryngeal growths are described somewhat at length, not from any special interest which they possess individually, for, with a few exceptions, they are of a character

which any one engaged in throat practice may frequently observe, but, taken collectively, they are valuable from a statistical standpoint, as they demonstrate the frequency of this interesting pathological condition, and may, perhaps, aid in refuting certain objections that have been raised by a recent writer* against their removal per vias naturales.

Before the introduction of the laryngoscope as a means of diagnosis, polypus of the larynx was regarded as of very rare occurrence, Ehrman,† in 1850, as a result of his researches, could find but twenty-six authenticated cases, all of which proved fatal except three.

A few years later, Dr. Horace Green,‡ of New York, in an able monograph, gives the entire number of cases recorded as forty, thirty-seven of which resulted fatally; seven or eight of the cases occurred in this country, four in his own practice extending over a period of five or six years. When we reflect that Dr. Green had an immense special throat practice, we can realize in a measure the large number of cases of growths that must have been overlooked for want of means of obtaining an accurate diagnosis; to quote his own language, “the symptoms indicative of the existence of these growths are not sufficiently defined to warrant us in laying down positive rules of diagnosis.” I venture to assert that during the past five years, since the introduction of the laryngoscope into general practice, one hundred and fifty would be a small estimate for the number of cases treated in this city alone.

SYMPTOMS.—Alteration of voice, cough and dyspnoea with a tendency to spasm of the glottis, upon making the slightest exertion.

VOICE.—The alteration of voice may range from slight huskiness or hoarseness to partial or complete aphonia; it is distinctive through its peculiar vibratory tone and metallic ring, and differs strikingly from the soft whisper of functional aphonia from paralysis of the abductors, the disagreeable huskiness of syphilitic laryngitis, or the unpleasant squeaking falsetto frequently met with in uni-lateral paralysis of the abductors. I have in some cases been enabled to establish a diagnosis from the voice alone, even before making a laryngoscopic examination.

*The Throat and its Diseases—Lennox Browne, London, 1878.

†Histoire des Polypes des Larynx—C. H. Ehrman, 1850.

‡Polyp of the Larynx—Horace Green, M. D., New York, 1859.

Cough is by no means an invariable symptom, and when present is generally of a short, dry, hacking character, caused by a movable or pedunculated growth.

Dyspnœa will be found only in those cases in which, from the size and position of the growth, the normal calibre of the larynx is greatly lessened.

TREATMENT.—In the treatment of the following cases, I practised evulsion by means of Mackenzie's forceps, the best adapted and safest instruments for the purpose that have yet been devised. They are greatly to be preferred to the guillotine of Stoerck, with which it is impossible to remove a sessile growth from the superior surface of the cords, or the awkwardly working tube forceps of Schrötter and other Continental laryngoscopists, on account of the facility of introduction, and the ease with which they can be opened or closed after having entered the larynx.

Mr. Lennox Browne,* in advocating non-instrumental interference by way of the mouth, states that serious complications or accidents are liable to follow the introduction of the forceps, such as ulceration, paralysis, perichondritis, caries, injury to the arytenoids, or death from spasm of the glottis. My experience includes many cases in addition to those reported in this paper, and I have never seen any unpleasant effects follow, further than a slight congestion of the mucous membrane lasting a day or two, and during which the introduction of the forceps was, of course, omitted. With reference to the objection that spasm of the glottis may arise, I would state that I have introduced the forceps, and carried them to the sub-glottic region, in cases in which the entire box of the larynx was filled with growth, and no ill effects have followed, and I believe that with a surgeon who has attained a fair amount of skill in the use of laryngeal instruments, the operation for the removal of growths through the mouth, by means of Mackenzie's forceps, is as devoid of danger as the passing of the catheter into the bladder, a sound into the uterine cavity, or the needle of an aspirator into a purulent liver.

Case I—SMALL PAPILLOMA ON LEFT VOCAL CORD—CURE.

Miss C., of New Jersey, aged 25, consulted me in September, 1874, at the suggestion of my friend, Dr. Hackley, for a hoarseness

*Op. cit.

which, for nearly two years, had prevented her taking the higher notes in singing, and had lately begun to show itself in conversation.

The patient was of a very pale, delicate organization, and her parents were inclined to attribute the hoarseness in her voice to phthisis pulmonalis, more particularly, as they had lost one daughter from that disease.

An examination, which was made with great difficulty owing to the nervousness of the patient, irritability of the pharynx, and a pendulous epiglottis, revealed nothing to account satisfactorily for the change of voice. The examination was not prolonged, but she was requested to call again in a few days. During the second examination, the patient gave a short, quick cough, and at that moment, a small growth came into view, which proved to be attached to the under surface of the left vocal cord at about the junction of the anterior with the middle third.

During quiet breathing the growth could not be seen, but whenever a violent effort was made, for instance, during loud talking, singing or coughing, it was thrown upwards and caught between the cords, but was so small, soft and compressible that it did not prevent approximation, but interfered only with the fine or more rapid vibrations of the cord, accounting for the huskiness, and explaining why there was not aphonia.

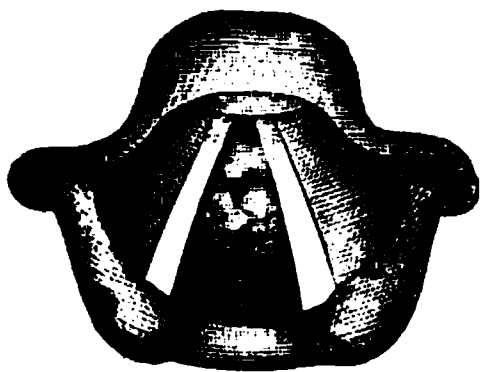
The treatment of this case, in overcoming the sensitiveness of the larynx and the natural timidity of the patient, was tedious and prolonged, but finally, after I had succeeded in introducing the forceps without provoking instant spasm of the glottis, I instructed her to give a short, violent cough, while the instrument was in the larynx; this, as I expected, threw the growth upwards and between the cords, at which moment, I succeeded in seizing and removing it. The patient recovered singing voice but not a mezzo-soprano; she sings in contralto, clearly and without effort. I must confess that I cannot explain the cause of this change of key.

I have examined this patient quite recently, three and a half years after the operation; there has been no recurrence of the neoplasm; voice and general condition excellent.

Case II—LARGE FIBROMA ATTACHED TO UNDER SURFACE OF RIGHT VOCAL CORD.—CURE.

George E., occupation, butcher, German, age, 36, large, muscular and robust, stated that he first observed hoarseness about two years ago, the consequence he thinks of a severe cold; he has no cough but complains of a constant tickling in his throat; at times he is quite aphonic, but generally his voice has the peculiar metallic, vibratory ring so distinctive of laryngeal growths.

An examination with the laryngoscope revealed a large fibrous growth about the size of, and somewhat resembling a bean, attached by a pedicle to the under surface of the right cord at about its junction with the middle and anterior thirds. During quiet breathing the tumor would drop below the cords, and almost disappear from view (as represented in the adjoining cut), but during the act of phonating it was forced upwards and lay either upon the surface of the cords or between them.



The epiglottis in this case was very pendulous, and the larynx difficult to illuminate, owing to which, and the thickness of the base of the tongue, the best and most satisfactory view could only be obtained by depressing that organ with the spatula instead of causing it to be protuded as in the ordinary examination.

Several unsuccessful efforts were made to seize the tumor during quiet respiration. I then directed him to make the *ah* sound loudly and forcibly, during which I rapidly introduced the forceps, and caught and severed the entire growth and pedicle from its attachments—voice returned at once.



The above cut represents the growth and pedicle after removal, (exact size).

Case III—SMALL PAPILLOMA ON RIGHT VOCAL CORD—REMOVAL—CURE.

Professor S., native of Germany, æt. 45, principal of a large school for boys, consulted me for loss of voice, in February, 1876.

He stated that for several years he had suffered from a hoarseness,

but about four months previous to consulting me he became quite aphonic, and has remained so ever since.

A laryngoscopic examination revealed upon the right cord and just anterior to the processus vocalis a polyps about the size of a small pea, overlapping the free edge of the cord, and preventing approximation, thus accounting for the aphonia.

The throat of this gentleman was capacious, well developed, and the larynx could be entered without difficulty; a few days were occupied in overcoming the irritability of the pharynx when the forceps were introduced, the growth seized, crushed and successfully removed at one sitting; voice returned immediately. An examination made over two years after the operation could detect no trace of the growth; voice excellent.

Case IV—SMALL PAPILLOMA ON LEFT VOCAL CORD—REMOVAL—CURE.

Patrick, æt. 48, occupation porter, consulted me December 10th, 1877, at the Metropolitan Throat Hospital, for chronic hoarseness, which had existed for over a year; at times he was quite aphonic.

An examination disclosed a small papilloma on the free edge of the left cord, in its anterior portion, preventing perfect approximation, no preliminary training was adopted in this case. The growth was seized and removed upon the first introduction of the forceps; voice was restored at once and he informs me that he sings without difficulty in his Sunday School.

An examination a few weeks ago and five months after the operation, could discover no trace of the growth.

Case V—LARGE PAPILLOMA ON BOTH CORDS—REMOVAL—IMPROVEMENT.

Jennie M., æt. 19, occupation singer, consulted me at the Metropolitan Throat Hospital, April 3d, 1878. She stated that two years ago, hoarseness came on slowly, and she was compelled to discontinue singing; attributes the hoarseness to a severe cold.

An examination revealed a large papilloma on the left ventricular

band, almost completely obscuring the left vocal cord; upon the right vocal cord was another covering the anterior third, and a still smaller one springing from the under surface of the same cord.

Several days were consumed in overcoming the irritability of the pharynx and the general nervousness of the patient, and owing to the latter, three sittings were required for the removal of the mass. A small portion of that attached to the *under* surface still remained, but as the improvement in her voice and breathing were so marked, she declined further operative interference for the present.

Case VI—SMALL CYSTIC GROWTH ON EPIGLOTTIS—REMOVAL—CURE.

J. R., æt. 38, occupation tailor, consulted me at the Metropolitan Throat Hospital, March, 1874, for sore throat. In addition to a follicular pharyngitis, I discovered a small cystic growth at the junction of the epiglottis with ary-epiglottic fold, right side. It was crushed without difficulty with Mackenzie's forceps—no return after several months.

Case VII—SYMMETRICAL OUTGROWTHS ON THE VOCAL CORDS—CURE.

Miss B., æt. 12, brought to me by her parents in March, 1875, for hoarseness, for which she had been compelled to discontinue her singing lessons.

Upon the anterior third of each cord, I discovered a nodule about the size of a very small pin-head, apparently of a fibrous character, and seemingly thoroughly incorporated with the cord tissues; approximation was scarcely interfered with, but the fine vibrations were. I did not deem instrumental interference prudent in this case, but explained to the patient that a cure might be effected by topical applications, but that the treatment would be tedious.

For about two years, applications of zinci. chlorid. grs. xv., to water $\frac{3}{4}$ i. were made at intervals varying from five days to

several weeks, occasionally the solid nitrate of silver was applied, but I found the zinc decidedly more efficacious. The nodule has entirely disappeared from the left cord, and but a mere trace remains on the right cord. The voice is clear, and she sings without difficulty.

Case IX—**ECCHONDROSIS OF LEFT SIDE OF THYROID—NO RELIEF.**

J. H., aged 30, Irish, consulted me at the Metropolitan Throat Hospital, at the suggestion of Dr. Moore, of Troy. About a year previous tracheotomy had been performed for laryngeal dyspnoea which had suddenly become alarming, since then has worn the canula; has had syphilis.

An examination revealed a large rounded mass on the left side of the larynx, just anterior to the left arytenoid, and filling almost its entire cavity. I performed thyrotomy, and found that the tumor grew from the thyroid, very hard and firm, and without doubt of the very rare variety known as ecchondrosis. I could make no impression upon it, either with gouge or knife, and attempts at removal brought on violent paroxysms of spasmodic coughing, although the patient was fully under the influence of ether.

I saw and examined him about fourteen months after the operation apparently; no change had taken place.

Case X—**PAPILLOMATOUS GROWTH—POSTERIOR WALL OF LARYNX—
OPERATION DEFERRED.**

Mrs. B., æt. 37, German, consulted me at the Metropolitan Throat Hospital for complete aphonia, which had existed for several months; slight dyspnoea was also present.

An examination discovered a large papilloma growing from the posterior wall of the larynx, and filling the inter-arytenoid space, and, preventing approximation of the cords.

This woman was very nervous and timid, and as she was six months advanced in pregnancy I deemed it prudent to defer operative measures.

Case XI—PAPILLOMA OF LEFT VOCAL CORD.—IMPROVEMENT.

T. S., a German, aged 42, consulted me February, 1878, at the Metropolitan Throat Hospital, for hoarseness and tickling in his throat which he first noticed a little over a year ago. His voice had the peculiar metallic ring so frequently observed in laryngeal growths.

A laryngoscopic examination revealed a papillomatous growth upon the posterior third of the left vocal cord projecting out slightly over the free edge.

The greater portion was removed without difficulty in three sittings, when he discontinued his attendance at my clinic.

Case XII—MALIGNANT GROWTH OF RIGHT SIDE OF LARYNX—THYROTOMY PERFORMED FOUR TIMES—RECURRENCE.

Mr. C., aged 47, occupation farmer, consulted me in October, 1875. He stated that about two years previous he first noticed the hoarseness which increased until at the time of consulting me he was quite aphonic.

An examination revealed on the right cord, covering the middle and extending well into the anterior third, a sessile growth which projected over the free edge and prevented approximation. At this time, I had no doubt from its general appearance that the growth was of a papillomatous character.

I removed the greater portion with the forceps, after which I resorted from time to time, to local astringent and caustic applications to destroy the little that remained.

In November, 1876, but a small portion remained, he then informed me that he probably would not be able to visit my office for about one month. He did not return, however, until the following April, at which time a great change had taken place. The

growth had extended backwards and upwards, filling almost the entire right side of the larynx. I made no attempt at removal on that day as he preferred waiting. He left intending to return within a week, I cautioned him to lose no time in doing so, if his breathing became at all impaired.

He returned in about a month for treatment, at which time there was great dyspnoea, the growth had extended downwards below the right cord, producing considerable lessening of the laryngeal calibre.

After a consultation with several medical friends, I determined to temporize and attempt again the removal by the mouth; a large amount was taken out in this way, sufficient to fill a small homœopathic vial, but it was re-produced so rapidly that it *seemed almost to increase under my eyes.*

At this time the stenosis was so great, that he breathed with difficulty, especially upon making the slightest exertion, such even as walking across my office.

Deeming it unsafe to defer tracheotomy any longer, on the 10th of June, 1877, this operation was performed at the Metropolitan Throat Hospital, immediately after which a thyrotomy. The growth extended downwards to the circoid cartilage, it was thoroughly removed, the cord destroyed, and the galvano-cautery freely applied to all the surface which had been covered by it. Two months later, in August, the operation of thyrotomy was repeated, again in October, and March of this year, omitting in the last two the galvano-cautery, and substituting a solution of zinci. chlorid. grs. xxx. to $\frac{3}{4}$ i. aq.

The portions of the growth removed by evulsion and also by thyrotomy were submitted to several eminent microscopists of this city for examination.

The first pronounced it to be "simply an hypertrophy caused by lymphoid infiltration—there are no distinct characteristics of a new growth"—but subsequently, upon learning the clinical features of the case, stated that it might be regarded as a small round cell **SARCOMA**.

The second stated that it belonged to the class "usually called papilloma" * * * "such tumors are of tolerably

frequent occurrence in the different mucous membranes, and their prognosis is usually very good."

The third to whom it was submitted regarded it as a "mixed growth" of the variety known as "epithelioma-papilloma."

The severe and constant pain which the patient has suffered from for some months past, together with the infiltration of the surrounding soft parts, the caries of the cartilages of the right side, the rapidity of recurrence after thorough removal and the excessive vascularity of the neoplasm, leave no doubt in my own mind of its malignant character, whether sarcoma or epithelioma-papilloma I am not prepared to determine, but simple or ordinary papilloma it cannot be.

The non-engorgement of the cervical lymphatics, the excellent condition of his general health, the non-extension of the disease to the pharynx, left side of the larynx or the trachea, induce me to regard its malignancy as of a mild type.

Removal of the larynx has been considered and proposed to the patient, but he declined an operation which in his case, at least, could not promise a prolongation of his days.

I shall perform thyrotomy, at least, once more in this case, and still again, should the circumstances justify it, as they hitherto have done.

Case XIII—LARGE PAPILLOMATOUS GROWTH, LEFT SIDE LARYNX.

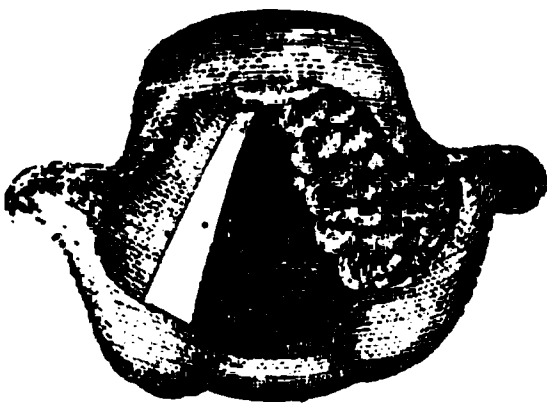
L. R., æt. 59, American, occupation farmer, consulted me at the Metropolitan Throat Hospital, Nov. 12th, 1874. He stated that hoarseness came about twenty-two months previous, but about eight months ago lost his voice entirely.

An examination revealed a large mass on the left side of the larynx, starting from base of epiglottis, partly covering ary-epiglottic fold, and reaching to the left cord, which was not visible. The growth was evidently of a papillomatous character; there was dyspnœa from the stenosis. He left the hospital promising to return for operation

but failed to do so.

Case XIV—CANCER OF THE LARYNX—TRACHEOTOMY—DEATH.

J. L., aged 56, German, consulted me at the Metropolitan Throat



Hospital, May, 1874, for loss of voice and pain in his throat which had begun, as nearly as he could remember, about eighteen months previous.

The patient was quite aphonic and suffering greatly from dyspnœa. No enlargement or engorgement of the cervical lymphatics.

A laryngoscopic examination revealed an irregular nodulated mass covering the entire left side of the larynx, from the base of the epiglottis to the sub-glottic region, and producing decided stenosis. There was no evidence of tuberculosis, nor was there a syphilitic history; however, he was given the benefit of the doubt, and specific treatment was fairly tried, without beneficial result.

The dyspnœa increasing, tracheotomy was performed to escape the fatal consequences of sudden spasm of the glottis. I had also decided upon removal of the larynx at a later period, the patient having given his consent, but after the tracheotomy, he failed in strength, and died on the sixtieth day.

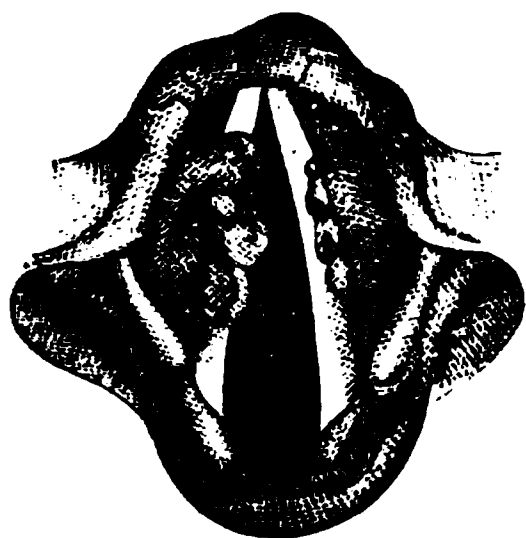
A post mortem showed that the disease extended below the cricoid, involving that as well as the other cartilages of the larynx.

The following cases were reported by me in the *New York Medical Journal*, for March, 1874. I have seen both patients quite recently, nearly five years have elapsed since the operations, voices are excellent, and no recurrence or trace of the growths.

Case XV.—G. S., aged 31, native of Ireland, occupation, laborer, sent me for treatment by Dr. J. H. Pooley, of Yonkers, September 18th, 1874.

He stated that hoarseness had begun about four years ago. During the past six months it had increased, and, at the time of reporting to me, he was quite aphonic. On laryngoscopic examination, two papillomatous growths were seen, the larger covering the right vocal cord for nearly two-thirds its length, a portion of which was attached by pedicle to the right ventricular band; a small growth occupied the middle third of left vocal cord.

The operation was performed after three days preliminary training, and completed at one sitting. A small portion of the pedicle by which the tumor was attached to the right ventricular band, and also part of the growth on the left vocal cord, were left for a subsequent operation, in consequence of the hemorrhage which ensued.

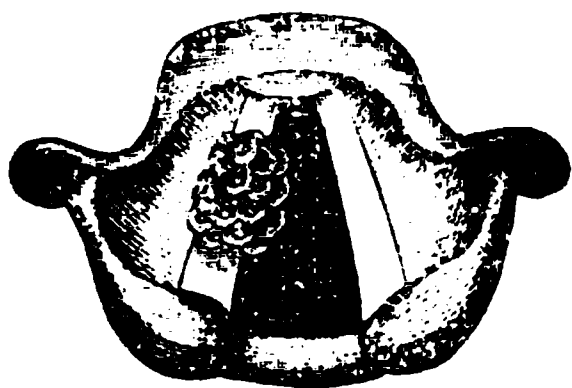


The case was presented to the New York Laryngological Society three and a half months after the operation, voice perfect,

and no return of growths.

Case XVI.—H. J., aged 38, native of Germany, occupation, merchant, has suffered from hoarseness for two years, at times scarcely able to speak above a whisper.

A laryngoscopic examination showed a papillomatous growth on the right vocal cord, about the size of a large pea, and extending from the floor of the ventricle to the free edge of the cord over which it projected, preventing approximation.



This patient's larynx was very narrow, and extremely sensitive to the introduction of instruments. The entire growth was removed after several trials, excepting a portion about the size of a pin's

head, which disappeared without further operative interference.

In the same number of the *New York Medical Journal* I reported a case very similar to Case VII.

She was under treatment for six months, there was marked improvement in the voice at the expiration of that period, but scarcely any diminution in the size of the nodules.

Another case of precisely the same character has quite recently consulted me for treatment.



Since writing the above I have performed the fifth thyrotomy upon Mr. C., Case XII. The operation was performed

at the Metropolitan Throat Hospital, July 9th, 1878—no anæsthetic was given—the parts were very vascular and the hemorrhage pro-

fuse. A larger amount of growth was removed than in any of the previous operations. A solution of zinci. chlorid. grs. xxx. to the ounce was freely applied to the surface after its removal.

At the time of writing, July 18th, the patient is very comfortable and no recurrence has as yet taken place.

The following case having recently come under my treatment, I include it in my report :

Case XLV—HOARSENESS OF THIRTY-ONE YEARS DURATION—LARGE PAPILLOMA REMOVED FROM ANTERIOR COMMISSURE AND RIGHT CORD—CURE.

W. N., aged 51 years, a native of Scotland, occupation, printer, consulted me at the Metropolitan Throat Hospital, July 9th, 1878.

He stated that thirty-one years ago while a soldier in the British army, he contracted a severe cold from exposure on the march, since which time he has suffered from hoarseness; and at times, complete aphonia.

In 1850, he consulted Dr. Hughes Bennett, of Edinboro', who suspected the presence of a polypus in the larynx, and made an application of a strong solution of nitrate of silver, by means of a sponge probang.

Another eminent Scotch Professor suggested a course of mercury for the relief of the hoarseness, probably regarding it as of specific origin; this treatment the patient declined.

For the past ten or twelve years, he has had no treatment except cough mixtures.

An examination with the laryngoscope revealed a very large papilloma, filling the space at the anterior commissure above and below the insertions of the cords, and covering completely the anterior third of the right cord.

Without preliminary training the forceps were introduced, and about one half of the growth removed, the remainder at two subsequent sittings. Voice excellent.

BIOGRAPHICAL.

DR. EDWARD WARREN, (BEY).

We have the pleasure of presenting to our readers a sketch of the eminent "Paris Correspondent," whose letters have constituted such an agreeable feature of the JOURNAL from its first issue.

Dr. Edward Warren (Bey) was born in Tyrrell County, North Carolina, on the 22d of January, 1828, of parents who emigrated from Virginia, and who belonged to two of the oldest and most distinguished families of that State. His father, Dr. Wm. C. Warren, was also a physician of eminence, a man of unusual intelligence and purity of character.

When the subject of this sketch was only four years of age, his father removed with his family to Edenton, North Carolina, where the son was educated up to his sixteenth year, when he was sent to the Fairfax Institute, near Alexandria, Virginia, and two years afterwards to the University of Virginia. In the latter institution he greatly distinguished himself, having secured honors and diplomas in many of its Academic Schools, and graduating after a single course in its Medical Department. In 1850 he delivered the valedictory oration before the Jefferson Society, and *the* honor of the College was adjudged to him.

In 1851 he graduated in the Jefferson Medical College of Philadelphia, and whilst pursuing his studies in that city, conceived the idea of injecting a solution of morphia under the skin for the relief of pain, using for the purpose a lancet-puncture, and Anel's syringe. In this mode of medication, he was, therefore, *four years in advance* of the inventor of the hypodermic syringe.

This device was made the subject of a thesis prepared for presentation to the Faculty upon applying for his degree, but one of the Professors to whom he had confided the idea, so forcibly expressed the opinion that it was both chimerical and dangerous, that the thesis was withheld and another substituted in its place.

Dr. Warren had, however, while yet a student put his idea into practical operation in many cases.

During the years of 1854 and 1855 he studied medicine in Paris, where he formed an intimate friendship with some of the leading

medical men of France, and occupied himself by corresponding with *The American Journal of Medical Sciences*, and other leading American Medical Journals.

Returning to America in the summer of 1855, he settled as a practitioner of medicine, in Edenton, N. C., where he soon acquired an extended reputation, both as a physician and as a surgeon. In 1856, he delivered the annual address before the State Medical Society, which was most favorably received, and also obtained the "Fiske Fund Prize" for an essay on the "Effects of Pregnancy on the Development of Tuberculosis," which was subsequently published in book form and has ever since been regarded as a leading work on the subject of which it treats.

In 1857 he was elected editor of the Medical Journal of North Carolina; made a member of the Gynæcological Society of Boston; and chosen a delegate from the American Medical Society of Paris to the American Medical Association.

On the 16th of November of the same year he married Miss Elizabeth Cotten Johnston, of Edenton—a member of one of the most ancient and honorable families of the State.

In 1860 he was elected Professor of Materia Medica and Therapeutics in the University of Maryland; first Vice-President of the Convention to revise the Pharmacopœa of the United States; and a member of the Committee on Literature of the American Medical Association. He at once acquired an enviable reputation in the city of Baltimore as a graceful, fluent and able lecturer.

In 1861 he joined his fortunes with those of the South, and was successively Chief Surgeon of the Navy of North Carolina; member of the Board to examine candidates for admission into the Medical Staff of the Confederate Army; Medical Director of the Department of the Cape Fear; Chief Medical Inspector of the Department of Northern Virginia (Gen. Lee's army); and Surgeon-General of the State of North Carolina.

Two of these positions were conferred upon him on the field of battle as rewards for personal courage and professional work. At the battle of Newbern, although at that time on Medical Board duty at Goldsborough, Dr. Warren volunteered his services and remained under fire with the wounded, after the other officers of the medical staff had betaken themselves to a place of safety. For

this he was made Medical Director of the Department of the Cape Fear.

Upon the battle field of Mechanicsville, in 1862, while again acting as volunteer surgeon, he was verbally appointed by Gen. Lee, Acting Medical Director of the Army of Northern Virginia; but knowing that Surgeon Guild, who ranked him, was but a few rods distant, Dr. Warren called the General's attention to the fact, and Surgeon Guild was made Medical Director, and upon his immediate suggestion Dr. Warren was retained as Medical Inspector.

By a special act of the Legislature of North Carolina his rank as chief medical officer of the State was raised from that of "Colonel" to that of "Brigadier-General;" for "efficient services rendered to the sick and wounded." He was also chosen by the Legislature, one of the Trustees of the University of North Carolina.

During the war he wrote a work entitled "Surgery for Field and Hospital," which passed through two editions. Among many other valuable suggestions which this book contained, was that for the treatment of "retracting flaps and conical stump" by means of extension with "adhesive straps, with cord and weight"—a procedure which is now very widely adopted, and the origination of which, after much discussion in the Journals, both at home and abroad has been finally conceded to Dr. Warren.

This method was put into practical operation in the hospital of the University of Virginia, as early as August, 1861, where as Dr. Hodgen, of St. Louis, who alone seriously disputed the priority, finally and very courteously acknowledged Dr. Warren's claim, stating that his own first use of the method was in 1863.

Subsequently, in a controversy conducted in the London *Lancet*, the claims were again settled in Dr. Warren's favor, by the publication of an extract upon the subject taken from his book which had been published during the war.

In the summer of 1865, Dr. Warren returned to Baltimore, ruined in fortune by the results of the war, and expecting to resume his Professorship in the University of Maryland. A refusal to return the chair to Dr. Warren furnished sufficient ground for legal proceeding by *mandamus* or *quo warranto*, but in view of the ruined fortunes of the contestant and of the financial and social influence of the Faculty, the suit promised to be a protracted one, and as the practical benefit to be gained in the event of success were

so small, it was concluded not to resort to the Courts but to leave the issue to public opinion, which it was thought fully sustained Dr. Warren.

Then came one of the most brilliant efforts in the life of the subject of our sketch. Under his direction the Washington University Medical School was revived, rising like a phoenix, putting itself at once on a plane with the old University which in effort to maintain its lead, made fundamental changes in its management and in the *personel* of its Faculty.

Dr. Warren filled the chair of Surgery in the Washington College with great brilliancy, and became the idol of the large number of students who resorted annually to the school.

When a law was passed creating a Board for the examination and registration of the physicians of the State, he was made a member of it. He was also elected Vice-President of the Medico-Chirurgical Society of Maryland. In 1868 he established *The Medical Bulletin*—a journal which obtained an extensive circulation.

In 1872 he appeared as principal medical expert for the defence in the celebrated Wharton trial. The circumstances of this trial were full of absorbing interest, it being characterized by great divergence of professional opinion, not only among the physicians and chemists engaged in it, but among scientific men, both in this country and in Europe.

General Ketcham was an eccentric old bachelor who died in the house of his friend, Mrs. Wharton, a lady of wealth and high social position. He was attended during his short illness by a physician of ability and prominence, whose line of treatment was somewhat varied, but who, although he did not arrive at a positive diagnosis, for some cause requested that an autopsy should be permitted. No examination was then made of the rachidean and cranial cavities, but some of the abdominal viscera were submitted to an antiquated chemist, who, after a very slovenly analysis, pronounced the presence of antimony. Upon this an indictment was found against Mrs. Wharton. Immediately, Dr. Warren was requested by the lawyers of the defence, to examine the medical testimony taken by the grand jury, and he promptly declared that the symptoms described by the attending physicians and nurses were typical of a certain form of cerebro-spinal meningitis. Resting upon this and upon the evidence of the insufficiency of the chemical analysis the

defence went to trial with the utmost confidence of success, and the result was a disagreement, with a majority of the jury, it was understood, in favor of acquittal. At least so assured was the State that the testimony did not warrant a conviction that a *nolle prosequi* was shortly entered.

Dr. Warren acquitted himself with great distinction on the witness stand, receiving congratulations and moral support from a host of medical men ; and although he had opposed to him, as witnesses for the State, a number of gentlemen with whom his relations were not cordial, on account of the old controversy, it was conceded on all sides that he came off with the advantage, his testimony, which was brilliant in the opportunity for reports afforded by the cross-examination, losing none of its force from the assaults of the experts for the prosecution. This is fully borne out by letters and telegrams spontaneously sent to Dr. Warren, after the trial, by Dr.

ordyce Barker, of New York, Dr. Stevenson, of London, and many other prominent medical men, and even by the Hon. A. K. Syester, Attorney-General for the State of Maryland, who personally conducted the prosecution of the case. Support, so unsolicited, and from such unbiased sources, speak volumes for the acumen and ability of Dr. Warren, but the limits of this sketch prevent the publication of the very interesting communications mentioned. Those from the medical men are all uniform in declaring that Gen. Ketcham's symptoms could not have been caused by tartar emetic, but resembled those of cerebro-spinal meningitis ; and the letters received from chemists declare that the chemical evidence for the State utterly "broke down."

One incident in this case attracted a good deal of attention and brought many compliments from the daily press; it was a rencounter between the Attorney-General, Mr. Syester, and the witness, is given here extracted from the phonographical reports in the New York newspapers :

Attorney-General.—"Where will this lead to Dr. Warren?"

Doctor Warren.—"It is impossible to tell as hypothesis itself is absurd."

Attorney-General.—"But *you medical* men ought to know all about these *medical* matters."

Doctor Warren.—"We know, at least, as much about these *medical* matters as *you lawyers*."

Attorney-General.—Springing from his seat and with great emphasis—but you doctors have the advantage of us. You “*bury your mistakes under the earth.*”

Doctor Warren.—“Yes, for you lawyers *hang your mistakes in the air.*”

(This reply “brought down the house” to such an extent that the judges had to adjourn Court for a quarter of an hour so as to give the officers an opportunity to restore order.)

The detraction which pursued Dr. Warren did not end with this trial, but survived and followed him to Egypt and Paris where it has been industriously circulated that he was obliged to leave Baltimore from having been “mixed up in a poisoning case.” It was even said that he privately communicated with, and prejudiced the minds of the celebrated Dr. Taylor and Dr. Stevenson, of London, who had expressed themselves so emphatically against the theory of death from tartar emetic. The following important letters from these gentlemen are given to disprove this. They are extracts from a Baltimore newspaper:

DR. TAYLOR’S LETTER.

15, ST. JAMES’ TERRACE, REGENT PARK, June 27, 1874.

Dr. Warren, Bey, Cairo:

Dear Sir—Your letter dated Cairo, June 13th, has been forwarded to me by Dr. Stevenson, in answer to your interrogatories, I beg leave to say :

1. That I received a copy of the Baltimore *Gazette’s* report of the Wharton-Ketcham trial. It was addressed, not to me personally, but to the Professor of Chemistry, Guy’s Hospital. As I had resigned the office, the report fell into the hands of my successor, Dr. Stevenson, and he had it in his possession for some weeks when he handed it to me, as being originally intended for me.

2. You did *not* furnish me with any other statement, report or document relating to that trial or any other subject.

3. You did *not* by any word, hint or act, comment on the evidence given at that trial, or in any way attempt to influence or bias my judgment in regard to it.

4. The premises for my decision regarding the case of General Ketcham were derived chiefly from the report of the Baltimore *Gazette* (sent by you, as I now find).

Taken as a whole, *I do not consider that the symptoms have any resemblance to those which are observed in poisoning with antimony*, and a further examination of the case has satisfied me that this is the only conclusion to which the *medical* facts lead. In the Guy's Hospital report for 1857, I collected and reported thirty-seven cases of poisoning with antimony. Upon the facts here collected, and others which have come to my knowledge since, I believe that the death of Gen. Ketcham was *not caused by antimonial poisoning*.

The chemical evidence did not conclusively show the presence of antimony in the articles submitted to analysis for evidence at the trial. There was a fatal omission in those who attended on the deceased in his last illness. The *urine* was not examined for antimony while the patient was living. The only conclusion to be drawn from this omission is that those who were in attendance on the General did not suspect that his was a case of antimonial poisoning while he was living and undergoing medical treatment, or they willfully neglected to adopt the best mode of verifying their suspicions and counteracting the effects of poison.

As, before this occasion, I have never received any letter from you or corresponded with you in any way, I must express my surprise that it should have been imputed to you that you have in any way attempted to influence my judgment. I did not even know that you had sent me the report of the *Baltimore Gazette* until Dr. Stevenson informed me, long after its arrival in England. You have my authority for stating as publicly as you please that such an imputation is utterly untrue, and, if made by a professional man, most unjustifiable. My opinion of the Ketcham case was formed apart from all local influences and prejudices. Having now had an experience of *forty-three years* in the subjects of poisoning, and an opportunity of examining, during that period, some hundreds of cases, I feel myself in a position to act independently of all hints or suggestions. To extra forensic statements in a case like this I give no attention.

I presume the telegram which you quote in your letter refers to me. You are at liberty to state in reply that no experts for prosecution or defence made any application to me in reference to this trial, or furnished me with any premises or information respecting it. The whole story is a falsehood from beginning to end. I see that Dr. Reese has been implicated in the matter. I do not know.

him, except by name. I never wrote to him or received any letter from him respecting this trial. I am

Yours, very truly,

ALFRED S. TAYLOR.

FROM DR. STEVENSON.

21 CAVERSHAM ROAD, LONDON, N. W., July 3, 1874.

To His Excellency, Warren, Bey, Cairo, Egypt:

My Dear Sir—I forwarded your letter to my colleague, Dr. Alfred Swaine Taylor, F. R. S., and he has handed me the letter which I now forward to you. I have read it, at his request, and I can speak with *knowledge* as to the circumstances under which he became acquainted with the Wharton-Ketcham case. In May, 1872, I received by post, at Guy's Hospital, a pamphlet, being a reprint from the *Baltimore Gazette*, of the report of the trial. I had no knowledge of the case before, and was ignorant in regard to the sending of the report until I came to your evidence, when I found your name interlined, and *with the simple word "Compliments," added in pencil*. When I had read the report I handed it to my predecessor in the chemical chair, Dr. Taylor.

My own opinion of the case, from reading the report, was this: that *the chemical evidence broke down and did not prove that "twenty grains of tart. emetic were administered to General Ketcham; and that the symptoms were not characteristic of any antimonial poisoning and might have been produced by natural causes," &c., &c.* Both Dr. Taylor and I think that you may fairly disregard all attacks on your character, as every one is liable to them. As for furnishing "false data," I know that all you furnished was *The Gazette's Report*.

Very truly yours, &c.,

THOMAS STEVENSON,

Professor of Chemistry, Guy's Hospital, London.

In attestation of the impression made upon the Attorney-General, the following letter was written by that gentleman to Dr. Warren, upon the eve of his departure for Egypt:

HAGERSTOWN, March 25th, 1873.

My Dear Doctor—I cannot describe the unfeigned regret I experience in your loss to us all, especially to me; for although I have

not seen and been with you as much as I desired—I always looked forward with pleasure to some time when our engagements would permit a closer acquaintance, and become warmed into a firmer and more fervid friendship. I dare not indulge the hope of hearing from you in your new position, but not many things would prove more agreeable to me. Present my compliments to your wife. That you and she may ever be contented and happy in life, that you may be as prosperous as your great talents and unequalled acquirements so richly deserve is the earnest hope of

Your humble, but undeviating friend,

A. K. SYESTER.

For 1872, Dr. Warren was chosen Chairman of the Section of Surgery of the American Medical Association; and presented to that body a new “splint for Fractures of the Clavicle,” which attracted much attention and really is an apparatus of great utility. Whilst it retains the fragments in apposition and gives no inconvenience to the patient, it permits all the normal movements of the fore-arm. Having retired from the Faculty of the Washington University, he then devoted himself to the organization of the *College of Physicians and Surgeons*, which has finally absorbed the former, and attracts classes as large as those of any school in Baltimore. This institution has wisely retained Dr. Warren’s name at the head of the list of Professors, as *Emeritus Professor of Surgery*.

In 1873, having become dissatisfied in Baltimore on account of a severe domestic affliction, he accepted a position in the service of the Khédive.

As soon as the President of the American Medical Association heard of his intended departure, he sent him a commission as a Delegate to all the Medical Societies of Europe; Drs. Gross, Pancoast, Sims and other prominent American Physicians gave him kind and most flattering letters of introduction to the leading medical men in Europe; and on the evening before he left Baltimore a number of its first citizens tendered him a public dinner at Barnum’s, which was one of the most successful and brilliant affairs of its kind that ever came off in that city.

His career in Egypt, though rendered brief by an attack of ophthalmia, which came near destroying his left eye, was signally brilliant.

Having been appointed Chief Surgeon of the General Staff, he soon had an opportunity of treating successfully the Minister of War for strangulated hernia,—who at once used his influence with the Khédive to obtain for Dr. Warren the Decoration of the Medjdié and the title of *Bey*—which, when conferred, as it was in this instance, by royal charter, ennobles its possessor and his family; and in less than a year from his arrival in the country, he succeeded in reaching the highest medical position known in the service of the Khédive, that of *Surgeon in Chief to the Department of War*.

The incident connected with this treatment of Kassim Pasha, who was the Minister of War, shows so well the moral force which enabled Dr. Warren to perform his duty in the face of discouraging circumstances, and serves to illustrate in such an interesting way, certain phases of life in Egypt, that it is given in full as related by the doctor.

Kassim Pasha was over 60 years old, and very fat, and had direct scrotal hernia, which the surgeons of Cairo failed to return after laboring over it for three days. After he had been abandoned to die and the preparations for his funeral were progressing, I was permitted to see the case. Finding that stercoraceous vomiting had just begun, and persuaded that the profound depression which others mistook for the effects of the disease, was mainly due to the injections of an infusion of tobacco which they had employed to induce relaxation. I declared the case not a hopeless one and undertook to treat it. Having stimulated the Pasha freely with brandy and water—which the natives considered unholy treatment—I had the gratification of seeing some reaction established; and determined to administer chloroform and ether to reduce the tumor by *taxis*, or to perform *herniotomy*, if necessary. I found, however, very great difficulty in getting any medical man to assist me. They all retired and said that they would have “nothing to do with the murder of the Pasha.” The Harem, through its representative, the chief Eunuch, declared that I should not proceed until the private physician of the Khédive—a Frenchman—had given his consent. He was accordingly sent for and asked what he thought of the measure which I proposed. He replied that, he believed the Pasha would die inevitably, but he was in favor of permitting me to proceed as every man was entitled to his chance. I then requested

him to aid me to the extent of administering chloroform. This he agreed to do on condition that I assumed *all* the responsibility of the case, and give him time to dispatch a messenger to the Khédive informing him upon what terms he had consented to aid me. In the presence of all the principal Pashas and Beys of the country, and the highest officials of the Court, the Minister was removed from his bed and placed upon a mattress in the middle of the room. None of the female portion of the household were present ; but they were represented by the Chief Eunuch, who stood at the feet of the invalid, shouting Allah ! Allah !! Allah !!! whilst from the laticed Harem in the rear, there came continually that peculiar wail which seems to form the principal feature in the mourning of the East. With the exception of the French physician, above referred to, all the surgeons had deserted the chamber, and stood in the little garden outside of the house, some praying that the sick man might be saved, but the majority cursing the stranger who had the temerity to undertake that which they had pronounced impossible.

At this moment, General Stone, the Chief of Staff, took me aside and said : “ Dr. Warren, consider well what you are undertaking; *success* means honor and fortune for you in this country, whilst *failure* means ruin to you and injury to those who are identified with you.” I replied : “ I thank you for your caution ; but I was taught by my father to disregard all personal considerations in the practice of medicine and to think only of the interests of my patients. I shall, therefore, do what my professional duty requires for this sick man and let the consequences take care of themselves.” Having made all the preparations necessary to perform *herniotomy*, should that operation become necessary in consequence of the failure of taxis, I boldly administered chloroform, although the patient was still in a great state of depression. To my delight, anæsthesia was promptly developed, whilst the circulation improved with every inspiration—just as I had seen it improve in some cases of shock upon the battle-field. Confiding then the administration of the chloroform to the French physician above referred to, I proceeded to examine the tumor and to attempt its reduction. I found an immense hydrocele and by the side of it a hernia of no unusual dimension—which by rather forcible manipulation I completely reduced, after a few moments of effort. By this time the surgeons, unable to restrain their curiosity, had entered the room and crowded

around me, anxiously awaiting the failure which they had so blatantly predicted. Turning to Mehemet-Ali-Bey—the Professor of Surgery in the Medical School of Cairo—I said to him: “the hernia is reduced, as you can see by pushing your finger into the external ring.” “Excuse me,” said he, in the most supercilious manner. “*you* have undertaken to cure Kassim Pasha and *I* can give you no help in the matter.” My French friend immediately introduced his finger into the ring and said: “Gentlemen, he needs no help from any one; the hernia is reduced and the Pasha is saved.” The doctors slunk away utterly discomfited; the Eunuchs, Pashas, Beys, and officers uttered loud cries of “Handallah! Handallah!! Kismet! Kismet!! Kismet!!!” (Thank God! Thank God!! It is fate! It is fate!!) and the Harem in the rear, catching the inspiration of the scene, sent up a shout of joy which sounded like the war-whoop of a whole tribe of Indians. In a moment I was seized by the chief Eunuch, embraced in the most impressive manner and kissed upon either side—an example which was immediately followed by a number of those present;—and I found myself suddenly the most famous man in the country. The Pasha at once had a letter addressed to the Khédive narrating what I had done for him, and asking that I might be decorated and made a *Bev*. His Highness sent for me, thanked me warmly for having saved the life of his favorite Minister; and said he was happy to honor one who had done so well for him; the Harem of the patient presented me with a beautiful gold watch and chain; my house was thronged afterwards with the highest dignitaries of the country who came to thank and congratulate me; and I immediately secured an immense practice among the natives—including nearly every *incurable* case in Cairo.

The spectacle of a stranger in a strange land, without support, undertaking duties which had been declined by others, and boldly pushing forward, in spite of the jealous mutterings which fell upon his ears, has something of true sublimity in it, and should make us appreciate the benignant nature of that moral and ethical code under whose guidance the subject of our sketch acquired that devotion to duty which enabled him to dare and do. For, behold the alternative, which, surely, he must have recognized:—had he failed, and had the Pasha died, his audacity would have wrought his ruin, and he would have been driven from the land in disgrace.

As it was, however, the signal triumph resulted in Dr. Warren being made the "Chief Surgeon of the Department of War."

In 1875, having obtained a furlough for six months, he visited Paris for the purpose of securing proper treatment for his eyes; and, on being informed by the leading oculists that a longer residence in Egypt would involve the loss of his left eye, he resigned his position in the service of the Khédive—who, in view of the eminent services which Dr. Warren had rendered in Egypt, treated him with the greatest liberality and kindness.

Through the influence of his own well established reputation aided by the cordial endorsement of his friends, Drs. Charcot and Ricord, of Paris, Sir James Paget, Alfred Swaine Taylor, and Dr. Stevenson, of London, Drs. Fordyce Barker and J. J. Crane, of New York, Professors Gross and Pancoast, of Philadelphia, he was soon able to commence the practice of medicine in Paris as a *Licentiate of the University of France*—a very great compliment in itself, and one rarely paid to an American.

Dr. Warren's success in Paris has been exceptionally rapid and brilliant. Practice and honors have both flowed in a continuous stream upon him. Foreigners of title and distinction have been as ready to avail themselves of his professional skill as have been his fellow countrymen. The London *Lancet* was happy to secure him as "special Paris Correspondent;" the Ottoman government confided to him the delicate task of selecting surgeons, and of raising contributions to his wounded. He received an invitation to participate in the proceedings of the "International Medical Congress" which recently assembled in Philadelphia—being the only American residing abroad who was thus honored. The College of Physicians and Surgeons of Baltimore conferred upon him at a late commencement the title of *Master of Surgery*; and he was made during the past year a "*Knight of the Order of Isabella the Catholic*," as a special reward for the professional skill displayed by him in the treatment of some Spaniards of high position.

While space does not allow even a reference to the multitudinous essays, reports, lectures, letters, addresses, &c., which have emanated from his prolific pen and active brain, enough has been said of Dr. Warren to justify the statement with which Professor Gross, of Philadelphia, concludes a letter in regard to him, viz: "from these facts it is plain that he (Dr. Warren) has performed a great

deal of work ; that he is a man of indomitable energy ; that he possesses great and varied talents ; and that he has enjoyed a large share of professional and public confidence." Surely, no North Carolinian has had a more brilliant and remarkable record, or one which the State has a greater right to regard with pride and admiration.

Dr. Warren's general culture and his great literary ability are widely known. His prose writings are lucid and chaste, though sufficiently ornate to be very attractive. His far flights into the domain of poesy attest a rich imagination, and considerable knowledge of rythm and versification.

In politics, the Warren family were old line Whigs, and the Doctor's affiliation in that direction brought him into intimate relation with North Carolina's great war Governor, Zebulon B. Vance, which time has only served to ripen into an affectionate and enduring friendship.

As the correspondent of the North Carolina MEDICAL JOURNAL, he sends letters monthly which are an abundant evidence of the great medical and surgical ability he possesses. They constitute a peculiar feature of our enterprise that has secured for us the encomiums of the medical press throughout the land, and delighted our readers with their polished periods and able summary of events in the great medical centre whence he writes.

When North Carolina shall perform her maternal duty of treasuring up the honors and preferments which have fallen to her children, she will point with pride to the record which Edward Warren has made for himself and her. We append as a fitting close to this sketch a list of the diplomas, commission orders, &c., which have been conferred upon him.

1st. A certificate under the seal of the University of Virginia, and signed by the President of the Institution, stating that Dr. Edward Warren is "a graduate in a number of its Academic Schools and in its Medical Department."

2nd. A Diploma in Medicine from the Jefferson Medical College of Philadelphia, Pa., dated March 6th, 1851.

3d. A letter from the Trustees of the "Fisk Fund," Providence, Rhode Island, announcing that "the prize for the year 1856 had been awarded to Dr. Edward Warren, of Edenton, N. C." Also, a

beautiful silver pitcher, goblet and salver—the prize received at the time.

4th. A letter from the Dean of the Medical Faculty of Maryland, dated April 5th, 1860, announcing the election of Dr. Edward Warren to “the chair of Materia Medica and Therapeutics in the University of Maryland.”

5th. An order dated “Battle Field, January 27th, 1862,” and signed “L. Guild, Medical Director, By order of General Lee,” appointing Surgeon Edward Warren, P. A. C. S., “Medical Inspector of the Department of Northern Virginia.”

6th. A commission, bearing the date of the 13th day of September, 1862, and signed “Zebulon B. Vance, Governor of North Carolina,” appointing “Dr. Edward Warren, Surgeon-General” of that State.

7th. A Diploma, bearing the date of “the 10th day of May, 1872,” and signed “Thomas M. Logan, M. D., President, and William B. Atkinson, M. D., Secretary,” stating that Edward Warren, M. D., of Baltimore, Maryland, had that day been appointed “Chairman of the Section of Surgery” of the American Medical Association.

8th. A Diploma, bearing the date of “the 6th day of May, 1873” and signed as above, stating that “Dr. Edward Warren, of Baltimore, Maryland, has been duly accredited to the Medical Societies of Europe, on the part of the American Medical Association.”

9th. Commission, orders, &c., showing Dr. Warren’s appointment as “Chief Surgeon of the General Staff of the Egyptian Army,” his promotion to the position of “Chief Surgeon of the Department of War of the Khédive,” his “permission to visit France on a leave of six months,” and his “honorable discharge at his own request,” from the Egyptian service.

10th. Royal Firman, written in Turkish, and sealed with the Khédive’s seal, given to Dr. Edward Warren when informed by the Khédive that he (Dr. Warren) had been made a *Bey* and Decorated, and setting forth the facts of the case.

11th. An Official Decree, signed by the Minister of Public Instruction of France, and bearing the seal of the University of France, authorizing Dr. Edward Warren-Bey to practice medicine in France.

12th. A communication from the Editors of the London *Lancet*, appointing Dr. Edward Warren-Bey, "special correspondent" of that Journal.

13th. A statement from the Dean of the Faculty of the College of Physicians and Surgeons of Baltimore, announcing that "the honorary degree of *Master of Surgery*, had been conferred upon Dr. Edward Warren-Bey," and stating that a proper Diploma will be forwarded.

14th. An invitation in due form from "The Centennial Medical Commission," inviting "Dr. Edward Warren-Bey, to attend the *International Congress* in Philadelphia and to take part in its proceedings."

15th. A communication dated, "Navy Department, Bureau of Medicine and Surgery, May 9th, 1873," and signed "W. M. Wood, Surgeon-General United States Navy," testifying "to the distinguished reputation of Professor Edward Warren as an operative surgeon, and as a teacher of surgery."

16th. A Diploma, signed by the King of Spain and attested by his Ministers certifying that Dr. Edward Warren-Bey was made a "Knight of the Royal Order of Isabella, the Catholic" on the 27th day of June, 1877, as a recognition of his distinguished skill as a physician.

17th. Certificates of membership of various Medical Societies in the United States—such as the American Medical Association, the State Medical Society of North Carolina, the Gynæcological Society of Boston, the American Medical Society of Paris, the Medico-Chirurgical Society of Maryland, &c., &c.

18th. An appointment of Medical Attaché to the American Commission to the Paris Exposition of 1878.

Injection for Erectile Tumors.—M. de St. Germain, of the Hopital des Enfants Malades, employs this formula, viz :—Water, sixty parts ; perchloride of iron, twenty-five parts, and chloride of sodium, fifteen parts.—*Gaz. des Hopitaux.*

CORRESPONDENCE.

OUR PARIS LETTER.

Meeting of the Academy of Sciences—Theory of the Explosion at Washburn Mills Discussed by M. Dumas—M. Trouvé on the Polyscope as a means of Exploration—Hippophagy in Paris and London—Means for the Prevention of Hydrophobia Instituted in Paris by M. Gigat—Treatment of Hydrophobia—Singular Freedom from Hydrophobia and Rabies in Egypt—Mahomedan Antipathy to Dogs—Epidemic of Diphtheria in Paris—Items of Treatment—Treatment of Ununited Fracture of the Tibia with Injections of Iodine by Professor Guyon—Experiments by M. M. Feltz and Ritter, Showing that Pure Urea does not Produce Convulsions—Scientific Congresses at Trocadero—Brown-Séguard the Successor of Claude Bernard.

11 RUE NEUVE DES CAPUCINES,

PARIS, July 20th, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—At the last meeting of the *Academy of Sciences*, Monsieur Dumas called attention to a letter which he had just received from a distinguished American geologist, relative to the terrible explosion which recently occurred in the Washburn Mills, and which the writer attributed to the presence of a vast quantity of flour, in a state of extremely fine dust, becoming ignited from the heat engendered by the rapid movement of the mill-stones. M. Dumas fully endorsed the opinion thus expressed and cited in its support a similar instance which occurred in Paris, some years ago, at a starch factory in the Rue la Verrerie. Some men handling a sack filled with that material, happened to burst it at the top of a stair-case, and the fine particles spreading gradually, at last came in contact with a light attached to one end of the lower walls, when a tremendous explosion occurred. He, therefore, fully adopted the explanation given of the recent catastrophe, and added that the observations made in coal mines all tend to the conclusion, that matter in a state of infinitesimal division, when mixed with atmospheric air, has all the explosive properties of a combustible gas.

M. Berthelot agreed with the conclusions arrived at by Dumas, and remarked that every one hundred cubic metres of air contains thirty kilogrammes of oxygen, sufficient to burn eleven kilos of coal dust or twenty-seven kilos of starch in a finely divided state, and that, consequently, a certain combination of circumstances is necessary to produce one of these explosions. When the dust is in too large a proportion, the oxygen is overpowered, and no ignition takes place; and when there is less present than the requisite quantity the same negative result presents itself. Hence it is, according to his deduction, that such accidents are of rare occurrence.

M. Trouvé has just presented to the *Société de Physique* a new and valuable apparatus to which he has given the name of *Poly-scope*. It is designed to facilitate the exploration of localities ordinarily obscure by concentrating upon them a flood of light. In appearance it somewhat resembles a bradawl or chisel, having, however, in place of the cutting edge of those tools, a semi-circular of polished metal which serves as a reflector. In this receptacle are brought together the points of two platinum wires which pass through the shafts and handle of the instrument and are connected with what is called a secondary battery—i. e., a battery which produces only a feeble but regular current of electricity. The principle thus utilized was first applied in surgery, some years since, by Dr. Marschall for actual cauterization and is now in general use for that purpose. In 1867, Dr. Bruck, of Breslau, attempted to use a similar instrument for the investigation of the diseases of the throat, but found that although sufficient light was produced, the accompanying heat was so great as to prove insupportable. The secret of the success of M. Trouvé consists in the fact that he has found the means to regulate the current of electricity in such a way as to consume all the heat which passes to the platinum points in producing incandescence and consequently to prevent its radiation. The apparatus seems likely to be a successful one; for the experience of those who have employed it, is decidedly in its favor.

Horse-flesh is liberally used for food on this side of the water; and now, that the price of beef is unusually high, the European traveler consumes more of it than he dreams of before hand or suspects afterwards. Statistics show that the number of horses killed for food in Paris during the first quarter of the present year, was 2,341, together with 106 asses and 14 mules. The first butcher's shop

for the sale of horse-meat was opened in London on the 4th of May last, and by the 4th of July, there had been disposed of 36 horses, 7 asses and 1 mule. The Committee for the promotion of the consumption of this article of food has awarded this enterprising English butcher a medal of honor and given him four hundred dollars besides—a sum which had been placed in the hands of M. Decroix for the encouragement of hippophagy in England. It is said that asses furnish the choicest “tit-bits” and are much in request by those who boast of a cultivated taste in this regard—a circumstance which should be duly considered by some of the multitudinous *politicians* who have sought positions as *scientific experts* in connection with the Paris Exposition, so that they may “fight-shy” of the English butcher and his French confederates. This warning to my aspiring but imperiled compatriots reminds me of a similar one which was given some thirty years ago in the good old town of Edenton in your State. Mr. Addis, the school-master, had given offence to the Trustees of the Academy by some innovations introduced into the curriculum of that venerable institution, and, at a meeting called for the purpose, some condemnatory resolutions were passed which the Secretary was instructed to communicate to him. It happened that, when this communication was made to the offender, a regulation had just been promulgated by the “city-fathers” to the effect, that “all GEESE found running in the streets should be destroyed by the town-constable;” and the enraged pedagogue instead of responding in due form to the Board of Trustees, contented himself with enclosing to each one of them a copy of the ordinance with these words, “House yourself, for your life is in danger,” written in conspicuous characters upon the face of it. Whether the injunction was obeyed or not, I am unable to relate, but I would commend the story to that class of individuals to which I have referred, for what it is worth.

Several fatal cases of hydrophobia have recently occurred in Paris, and the authorities have inaugurated most vigorous measures in regard to it. Monsieur Gigat, the indefatigable Prefect of Police, has issued the following orders to the Commissioners in the different arrondissements: 1st. It is forbidden to raise or to keep upon any premises such a number of dogs as is calculated to interfere with the salubrity or comfort of neighboring houses; 2nd. It is forbidden to permit dogs to run at large in public thoroughfares or

even to carry them there in leash, unless they are securely muzzled: 3d: All dogs must have around their necks collars upon which are distinctly engraved the names and addresses of their owners; 4th. Dogs must be kept muzzled in stores, shops, work-rooms and other public establishments, even if they are tied up; 5th. It is forbidden to allow any bull-dog to run in the streets or to carry such a dog there, whether muzzled or in leash; and the same restriction is to apply to all mongrel and crosses of this breed.

At the same time a very carefully prepared epitome of the leading symptom of canine rabies has been issued in the form of a report from the Committee of Public Hygiene, and generally distributed, so as to give the public explicit information on this important subject. Suggestions as to the best means of prevention have also received alike dissemination, while steps have been taken to collect additional information on a most comprehensive scale relative to the disease in all of its connections. The report to which I have referred, enjoins cauterization as the only efficient remedy after a bite has been received; and recommends especially the red-hot iron—the *hotter* the better because giving less pain and greater protection. In default of the iron, it recommends the Vienna paste or sulphuric acid; and it also suggests, that, while the metal is being heated, the bitten limb should be compressed tightly above the bite and an attempt made by pressure with the fingers to squeeze out the liquids contained in the wound, washing it freely at the same time with cold water. If the bite is upon the mouth the patient is instructed to suck it himself without delay, as there is no danger in the suction if there is no abrasion of the lips or of the mouth.

The report likewise insists upon the immediate destruction of every dog or cat bitten by a dog, whether only slightly sick or actually rabid, and the institution of the most prompt and decided measures whenever a human being has been bitten, without regard to the condition of the animal by which the wound was inflicted.

The journals—medical, political and scientific—have teemed with recommendations of remedies for the cure of hydrophobia, but it is generally agreed that the true treatment of the disease has not been discovered. A writer in a recent number of the London *Lancet* pretends to have cured cases of this malady by the administration of large doses of *stramonium*; and another gives in the last issue

of that journal a very interesting account of a case in which prompt permanent relief followed the application to the wound of arrows steeped in *wourali* poison. This treatment is heroic enough, to say the least of it, and requires the confirmation of much additional experience to give it character with the profession. In this connection, I must say, that, during the entire period of my residence in Egypt, I neither met with or heard of a case of rabies or hydrophobia and such had been the experience of all the resident physicians with whom I conversed on the subject. I am convinced that dogs seldom go mad in that country, notwithstanding their great numbers, the wretchedness of their condition, and the extreme heat to which they are exposed for at least eight months of the year. *A propos* of Egyptian canines, it is proper to add, that, although Mahomedans do not treat dogs with positive cruelty, they regard them as "unclean animals," and, consequently avoid them religiously and stand in mortal terror of them. *Par example*, a grand Pasha once did me the honor of calling at my house in a friendly way, and finding the door opened entered my parlor and clapped his hands, according to the Eastern style, to summon a servant. Unfortunately, the noise attracted the attention only of a poodle which was kept as a pet by my children, and the little creature ran out in the most familiar manner and greeted my august visitor with a bark of welcome. Suddenly, there were heard shrieks, imprecations and prayers issuing from the room—of so emphatic a character as to arouse the whole household—and to bring every member of it with lightning speed upon the scene. To our amazement, there stood His Excellency, mounted upon my centre-table, with hands uplifted in supplication, crying most lustily to us and to Allah for protection, whilst the frolicksome pup frisked around him in furious glee, barking as if he would "split his sides" over the achievement of having "treed" a Pasha. It was not until our little pet had been gathered to his fathers, that my distinguished friend ventured on paying me another visit, and I feel quite sure that he never forgave me for having him subjected to the outrage of so near a contact with an "unclean" thing.

Paris has been for some months the seat of quite a severe epidemic of diphtheria. Several prominent members of the profession, in fact, have fallen victims to it, having contracted the disease at the bed-side of their patients. These facts have led to a very thorough

investigation relative to the best mode of treating the disease, with the result of placing our old friend the chlorate of potash in the front rank of the agents to be employed against it. Tannin was, as you know, advised by Trousseau, and its use in somewhat a novel manner is now advocated by Dr. Crégny. He employs inhalations from the steam of boiling water to which tannin has been added, believing that enough of the drug can in this way be brought in contact with the exudation to destroy or to modify it. Dr. Soulez believes in the employment of what he calls the carbolate of camphor, which is prepared by dissolving twenty-five grammes of powdered camphor in one gramme of alcohol and nine grammes of carbolic acid. He applies this compound with the oil of almonds, to the false membrane, with the effect—according to his statements—of causing it to disappear very rapidly and leaving behind a simple ulceration which readily heals. Seeligmuller insists, however, that nothing is comparable with chlorate of potash in this connection. He gives decided doses every hour, and believes that it acts, not alone as a topical alterative and resolvent, but that, by virtue of its potency in carrying oxygen to the blood, it purifies and tonifies the entire organism and enables the system to withstand the force of the poison with which it has become surcharged. Ferrand agrees that it is a most useful remedy in this disease, but ascribes its efficacy to the fact that it is excreted by the salivary and pharyngeal glands. Cadet de Gassicourt, who made a comparative trial of chlorate of potash, cubebs and salicylate of soda, at the Hopital St. Eugénie, unhesitatingly pronounces in favor of the chlorate. Cubebs and copaiba are, however, greatly extolled by some practitioners—notably Trideau, who gives them masked by sugar and malagar wine after having first employed an emetic of ipecac. Actual caustics have fallen into general disuse, while the simpler local applications, such as glycerine and borax, a weak solution of muriatic acid, lime-water, sulphate of soda, &c., are generally employed in this city. After much experience, I am convinced that a combination of chlorate of potash and the muriated tincture of iron, gives the best results in this disease, together with the application of the tincture of iodine, somewhat diluted with water, and the liberal use of disinfectants.

This allusion to the tincture of iodine reminds me of a very interesting case which has lately occurred in the service of Professor

Guyon. A young man entered the hospital on the 4th of November, 1877, having submitted a short time previous a fracture of the tibia at the junction of its upper and middle third. Notwithstanding the employment of the means most in vogue here, up to the 28th day of March, 1878, no consolidation had occurred and the fragments remained as mobile as they had been found on the first day of treatment. The Professor then injected by means of a syringe of Pravaz, into the point of fracture, a quantity of the undiluted tincture of iodine—taking care to introduce the needle very slowly and carefully, and to discontinue the operation so soon as a serious resistance to the entrance of the fluid was experienced. No pain was felt and no unfavorable indication presented itself. On the fourth of April and again on the 15th of April the injection was repeated, and on the 4th of May the union was found to be perfect—nothing remained but a slight rigidity of the knee.

Of course, the remedy thus employed is an old one ; but as the indication was to induce only a limited amount of inflammatory action, and as the consolidation was effected with great rapidity and without the induction of any untoward symptom, the idea which suggested its application was a happy one, and the result secured deserves to be chronicled. Guyon, though something of an old fogey, is a safe and reliable surgeon, and usually accomplishes what he undertakes.

M. M. Feltz and Ritter have published some experiments which tend to show that pure urea never produces convulsive symptoms. Urea injected into the blood was rapidly eliminated by the kidneys, and when it existed in considerable quantity in the organism it did not, as is generally supposed, undergo a rapid transformation into the carbonate of ammonia. Dogs into which urea was injected, after the renal vessels were tied to prevent the rapid elimination of the poison, should no more decided convulsive movements than others in which the same vessels were ligatured without the injection. The convulsive symptoms observed when urea was present were due to an impure substance containing ammoniacal salts. They, therefore, announce the following conclusions : 1st. Pure urea, whether natural or artificial, injected into the venous system in large quantities, never brings on convulsive symptoms and is rapidly eliminated ; 2nd. There are no ferments in the normal blood which convert the urea into ammoniacal salts ; 3d. The urea which

in large doses brings on convulsions, is always an impure urea which contains ammoniacal salts. These investigations have been faithfully conducted, and they are regarded here as being entitled to much consideration. If my memory serves me properly they tend to confirm, in a measure, the truth of some propositions, in this regard, announced many years since by our distinguished compatriot, the voluminous and luminous Hammond.

Scientific Congresses are being held daily at the Trocadero. Conventions on the subjects of ethnography, legal medicine, hygiene, statistics, &c., &c., are to be succeeded by a grand re-union of the French Association for the advancement of science. To the meeting of this latter body a general invitation has been extended; while physicians of every nationality have been specially called upon to take part in its proceedings, in order that they may show to the world what *real* progress has been made in medicine. It is earnestly to be hoped that some of our leading men will be present and that they will avail themselves of the opportunity to show how much the American profession has accomplished for the cause of science and the interests of humanity. Of course, there are many physicians who would prove an honor to their country in this regard, but if I were called upon to select its representatives for this illustrious occasion, I should without hesitation, nominate the two great representative surgeons of America, Professors Gross and Pancoast, of Philadelphia, confident that they would bring with them a prestige and take a position here which would commend the homage of the nations and prove a perpetual source of honor to their native land.

Very truly and respectfully yours,

EDWARD WARREN, (BEY) M. D., C. M.

P. S.—I open my letter to record the fact that the Academy of Sciences, at its sitting on Tuesday, presented M. Brown-Séguard, and M. Dareste de la Chavane, as candidates for the Professorship of Medicine at the Collège de France, vacant by the death of M. Claude Bernard. The former obtained 25 votes; the latter 23. It will be remembered that M. Brown-Séguard also figured as the first on the list of presentations, decided on by the Professors of the Collège de France.

E. W.

OUR NEW YORK LETTER.

Summer Dearth—Medical Absentees—Sawbones vs. Elevated Railway—Professional Vagaries—Lombard's Thermo-Electric Apparatus—Thymol—Sclerotinic Acid—Emmet's Principles and Practice of Gynæcology—Stimson's Manual of Operative Surgery—New Mode of Embalming.

46 WEST THIRTY-SIXTH STREET,
NEW YORK, August 3d, 1878.

There is a distressing dearth of medical news in this great Omphalos, and your correspondent is driven to make up his mid-summer's letter of odds and ends rather than well ordered excerpts from his note book. The Colleges are closed; the Societies adjourned; the dispensaries dull; patients in the mountains, or sniffing the salt sea-air, and the Doctors are following them up, or casting hooks for sportive salmon in the chilly waters of the Saguenay. Many of our prominent men are seeking rest and retirement in the corridors of the great Exposition, but, thanks to the frequent bulletins of thoughtful friends who record their progress, we that remain have not forgotten them. Indeed, if the truth must be known, we could spare them indefinitely, and never forget them. Still, *ne vile velis*, and let us wish them a safe return.

When I think of these happy voyageurs I recall a Macaronic verse from "Gleanings for the curious :—"

" On the Rhine, the Rhine, the Rhine—
Comme c'est beaux wie schön ! che bello !
He who quaffs thy Luft und Wein,
Morbleu ! is a lucky fellow !"

The assault of the doctors on the Elevated Railway does not appear to have upset that structure, or to have diminished sensibly the deafening noise it makes. In their gravamen they allege that it was inductive of laryngitis, phthisis, arrest of cerebral development, &c., &c., and this information came from less than three weeks experience with the running of the trains. It was a very unscientific paper that these 140 sawbones signed; and however disposed we may be to regard the effort of railway noises in inducing laryngeal and pulmonary affections, the only evidence of arrest of

cerebral function so far noticable, is that evinced by the signers who, thought, (without thinking) that the gravity with which the subject was presented was a measure of the weightiness of the argument.

When will doctors stop putting their names to every paper that is poked at them? It would be interesting to note how many of these 140, if called into court as witnesses in this case, would be able to sustain fully, under oath, the opinions so emphatically set forth, in their memorial to the grand jury.

But Doctors everywhere do and say foolish things sometimes, unlike England's King, of whom a great wit wrote, as an epitaph :

“ Here lies our Sovereign Lord, the King
Whose word no one relies on,
Who never did a foolish thing
And never said a wise one ;”

And now we hear that in medical circles in North Carolina, it is reported that a prominent neurologist of this city humbugged one of your statesman from the Blue Ridge region, by suspending a rotating needle before him; if it stopped with its point towards the patient the anterior part of the brain was diseased, whereas, if the butt end pointed towards him it demonstrated that the posterior lobes were affected.

Now, those who call themselves physicians do but expose their own ignorance, if nothing worse, in repeating this silly story, for they should know the “needle” has reference to Lombard's delicate thermo-electric apparatus which indicates with great precision the differences in degrees of temperature of various parts of the body, and is used by eminent men in this country and Europe to locate hyperæmia, and as an aid to diagnosis.

In addition to this idle gossip, we hear of letters that have been written to gentlemen in distant States, inquiring if they were ever treated by such a doctor for certain obscure troubles, and what was the fee! All this is wrong, being highly unprofessional and it should subject the author to the severest discipline of any Society of which he may be a member. It ought to be understood that the Medical Societies are the only tribunals before which personal and ethical grievances should be brought. All appeals to the people through public lectures or the press are *coram non judice*, and serve but to degrade the profession into jarring factions.

Nothing new to report in surgery. Among new remedies thymol is coming prominently forward as a substitute for carbolic acid. It is not disagreeable in odor, and not poisonous if absorbed. The strength of the solution varies from 1 part in 1000, up. Sclerotic acid, an educt from the *secale cornutum*, is under trial in the treatment of uterine fibroids. The reports of its hypodermic use are quite favorable. In using it, as, indeed, any other preparation of ergot, the diagnosis of fibroids should be unmistakable, for Emmet has shown clinically that if no fibroids are present (a retroverted uterus being mistaken for fibroid) the remedy may excite or increase a congestive hypertrophy, or even give rise to an attack of cellulitis.

Dr. Emmet's great work on the Principles and Practice of Gynæcology is now in press, and will appear early in the autumn. It is a marvel of industrious labor, and will secure for its author an imperishable fame. I have been permitted to see the manuscript, but I cannot convey in a few words an idea of the thorough mastery of the subject which is evinced on every page. It is unlike any other work on the Diseases of Women yet published. It is unique in its arrangement, in the treatment of its matter, in the clear, lucid manner in which minutest details are placed before the reader, and in the wonderful tables compiled from thousands of cases, which show the relations of uterine diseases and displacements to menstruation, age, pregnancies, social conditions, &c.

Perhaps it is true there were warriors before Hannibal, but, in a special sense, there were few gynæcologists before Emmet; and this we may say not figuratively when we remember his connection from the very opening, with what for a long time was the only woman's hospital in the world.

A very handsome octavo volume of nearly 500 pages, called a Manual of Operative Surgery, by Lewis A Stimson, M. D., of New York, has been published by Mr. Lea, of Philadelphia. This book would have been better named if "SURGERY OF THE CADAVER" stood as its title. The descriptions of the various operations are, it is true, well given, in clear, pure English, and generally the best methods have been selected.

But apart from the mere mechanical handling of the knife, too little attention has been given to the numerous details which must be observed to ensure success in every surgical attempt. And the figures

have a stiff, waxy look which the tissues could not possibly assume except in the dead body. Figure 291, page 431 is one of the most obvious in this respect. Indeed, it would be impossible to conceive, from an examination of this figure to what extent the parts are to be freshened in the operation for a ruptured perineum. The skin and posterior vaginal wall have a hardened aspect, and the body of the perineum looks like the cavity of the rectum, and might be mistaken for the rectum, did not the well defined stigma below, representing the anus, indicate that the sphincter was not torn. We note with surprise also that the silk is introduced as for quills, but this mode of suturing is now almost universally discarded.

The description of Boeckel's method of gaining access to the pharynx through the nose is very imperfectly given, and much room is left for doubt as to the successive steps to be followed in making the quadrilateral (he means rectangular) osteo-cutaneous flap. This operation is not nearly as good in its results as Ollier's, and might have been omitted. The method of moving very large polypi, by depressing both upper jaws, as attempted by Cheever, of Boston, and performed successfully by Tiffany, of Baltimore, is not alluded to.

No mention is made of the methods of catheterizing the male bladder; nor are the important operations of dilating urethrotomy and dilation for stricture, spoken of anywhere—evidently an oversight.

In the surgery of the eye the old operation of couching the lens consumes a whole page, although the author acknowledges that it is a condemned procedure. Strabotomy is quite fully treated of, but no account is given of Grandcléments' new operation of resection of the external rectus.

In relating the measures to be taken against threatened death from chloroform anæsthesia, nothing is said of nitrite of amyl, which with inversion by Nélaton's method, it is believed, constitutes the most efficient resource.

We look with pity and surprise at the poor devil's leg, which the figure represents as undergoing resection of the tibia. What the occasion for the resection is, cannot be learned, hardly, however, for the unsightly bow which the bone has at a point at which it is normally bent in the opposite direction. Schematic figuring sometimes is guilty of the greatest solecisms,

It must not be thought that in pointing out these defects (if defects they be, and some of them are common to all manuals of operative surgery) it is intended to convey the idea that the book is without merit. On the contrary, it is full of excellent features, and does great credit to the rising young surgeon who compiled it. The chapter, or part, on amputations is very clear, as is that on the ligation of arteries. The description of Wood's method for the radical cure of hernia is complete, and I do not know where we may look for a more satisfactory account in such brief space, of the various modes of sewing up wounded intestines. Lithotomy, perhaps, is somewhat slighted. It is hoped the young operator will not turn the cutting edge of his blade in the direction indicated by the figure which represents the rectangular staff in situ. The opinion is expressed that the operation by external urethrotomy without a guide is a most difficult task, the only landmarks being the hole in the triangular ligament (Van Buren and Keyes) and the apex of the prostate which can be felt per rectum. Why the centre of the arch of the pelvis is not taken as a guide I cannot conceive, as it is easily felt, and must always indicate the course of the urethra. Making that a landmark, according to Dr. F. N. Otis, renders this operation as easy and certain as if a staff were employed.

Dr. Stimson's work is an attest of the influences which in New York tend to stimulate young men to write books. Precocious authorship is, as a rule, (Dr. S. is four years in practice) destructive of growing reputation, but I am quite sure that this instance will prove an exception, for the intrinsic merits of the book are beyond question, and it is the best work of its kind now in print. We should remember that Druitt's Surgery was the product of a medical student, and yet it has held its own through numerous editions, substantially unchanged, and is to day the book *par excellence* for undergraduates.

Some interest has been excited by the exhibition of a new mode of embalming, devised and patented by a Dr. Rogers, of San Francisco. He uses a fluid which he calls alekton (meaning unceasing) and says it is so harmless that small quantities may be drunk without injury, and it may be used for preserving meats intended for consumption.

I have not yet witnessed the process, but if it justifies the claims made for it, it will return a handsome fortune to the inventor, and prove a great boon to the demonstrators of anatomy at the colleges, some of whom now resort to the most disagreeable and unsatisfactory methods of "pickling" bodies during the summer, to ensure an abundance of dissection material for the enormous classes of the winter. This fluid, the preparation of which is yet secret, is claimed to be superior to every other substance for disinfecting and aseptic purposes.

An error crept into my last letter in reference to the invention of the laryngoscope; the credit should have been given to Garcia, instead of to Mario." DER.

• REVIEWS AND BOOK NOTICES.

NERVOUS DISEASES: Their Description and Treatment. By AL-
LAN McLANE HAMILTON, M. D., etc. Henry C. Lea, Phila-
delphia. 1878. pp. 512. 8 vo.

If people only wrote books when there was something important for them to say, publishers would not revel in the wealth and luxury which are supposed by the needy author to be the results of a mal-diversion of the proceeds of his labor from him to them. If Dr. Hamilton had been guided by this principle the volume before us would certainly never have seen the light, for we have searched it in vain for a single original, and at the same time useful observation.

For this state of facts the author is only secondarily responsible. Those indiscreet friends who persuaded him to appear before the public in the light of a teacher, should in fairness bear the weight of blame for the failure which is apparent on every page. On reference to the Medical Register, we find that the author graduated in 1870—scarcely eight years ago. During that period it is improbable that he could have acquired the knowledge and experience necessary for one who sets out with the design of instructing others in a branch of medical science, confessedly obscure and difficult. It is to be remembered, too, that for the greater portion of

the time mentioned, Dr. Hamilton has occupied the position of Sanitary Inspector, under the Board of Health. The duties of this office were extremely onerous, requiring time and labor in visiting and inspecting all suspected sources of deleterious effluvia. Let any one of our readers place himself in imagination in Dr. Hamilton's position, and then searchingly enquire as to his capability for writing a creditable treatise on an intricate and extensive subject, and he will have some idea of the value to be attached to the volume under notice.

As was to have been expected—and as no one with Dr. Hamilton's lack of qualifications, venturesome enough to write a book could have avoided,—his production is made up of the observations of others, thrown together in the crudest and most unscientific manner, with here and there a badly reported case of his own. Dr. Hamilton by a labor-saving process which the precocious author is apt to adopt, has not hesitated, as we have repeatedly noted, to use the references without verification, which others, especially Jaccoud, and Hammond have laboriously looked up for themselves, and this without giving the least credit to the authority whose work he has thus appropriated.

For instance, on page 256 in the chapter on “Progressive Muscular Atrophy,” he gives a wood cut of the *main en griffe* and credits it to Roberts. Obviously he did not know that Roberts had taken it from Duchenne, and that the representation had nothing to do with progressive muscular atrophy, but refers to a deformation of the hand, caused by a wound by which the ulnar nerve had been divided. Roberts copied the cut exactly, and the wound on the anterior face of the fore-arm is shown, as in Duchenne's drawing, but Dr. Hamilton leaves out all indication of the injury, evidently supposing it to be a useless piece of shading.

On page 73, under the heading of “Cerebral Hyperæmia,” he quotes Calmeil as saying that men are more subject to that affection than women; and, with a disregard for French syntax, and for accuracy of description refers this observation to “*Maladies inflammatoire du Cerveau*.” Now, on turning to Calmeil's *Traité des Maladies Inflammatoires du Cerveau*, we find that he makes the remark in regard to an affection altogether different from that which Dr. Hamilton designates cerebral hyperæmia, and which he describes under the heading “*des attaques de congestion en-*

céphalique brusques à durée temporaire ou des fluxions encéphaliques brusques de nature inflammatoire." There were nineteen cases and all terminated in death. The inference is inevitable that Dr. Hamilton has never consulted Calmeil's treatise from which he pretends to quote.

In regard to this cerebral hyperæmia of Dr. Hamilton's, we may remark *en passant* that the description is taken almost verbatim from Hammond without credit.

We must also call attention to the fact that Dr. Hamilton claims to have treated 160 cases. Of these, 18 were bar-tenders, 15 bakers, and 19 blacksmiths. He has certainly had, if this title be correct, more patients of these occupations affected with a single disease than any other physician has had with all the diseases known to nosologists. Indeed, we doubt if there is another physician in New York who in ten years has treated 18 bar-tenders, or 15 bakers, or 19 blacksmiths.

And again, he says, that his experience teaches him that among others, sugar-refiners and glass-blowers are particularly liable to the disease, and yet, in the table giving the occupations of the 160 cases not a single one is set down to either of the above-named pursuits.

On page 120, he says, "a great many observers, among whom were Durham, Kausmall, Tenner and Fleming, strongly held that the brain was anæmic during repose, the anæmia being the cause of sleep." If by *Kausmall*, Dr. Hamilton refers to the Kussmaul, who in conjunction with Tenner, wrote a monograph on "Epileptiform Convulsions from Hæmorrhage," we may take the liberty of observing that neither he nor his collaborator says anything of the kind, or anything that either or both ever wrote.

In speaking of "professional cramp" or "writer's paralysis," as it is often called, Dr. Hamilton claims to have seen twenty-three cases—a larger number probably, than has been under the observation of any other physician in any country. In the table of occupations, of these twenty-three, two are "musicians," and yet, he speaks of having seen cases among violin players, and cites another as occurring in a pianist. He states further, that "all" were men and between the ages of 30 and 60; and yet, on the same pages gives some particulars of a case occurring in his own experience in a young lady.—(pages 486 and 487.)

All this, if not something worse, is certainly very lax writing. It is only a small portion of a great deal more of the same kind.

The typographical appearance of the book is good. It is, however, almost an exact *fac simile* of Dr. Hammond's treatise. Thus Liebreich is called "Leibreich," and the columnus of Goll are invariably spoken of as the columns of "Gall." The style is obscure and often ungrammatical.

For instance, (page 80),

"Abstinence from alcohol in some cases, attention to the bowels and the precaution of keeping the head cool and the neck unconfined, are the first observances to be followed by the physician and patient." We commend this advice to all junior practitioners, but if it is to be carried out in other things what will become of the proverb that "a physician never takes his own medicine."

"With a hypertrophied ventricle and renal disease, the patient has little to be thankful for, and one must always give in each case, a very guarded prognosis," (p. 80.) We imagine no one but Job would dispute with Dr. Hamilton on the point of being thankful for "a hypertrophied ventricle and renal disease."

In conclusion, we find one other matter in which we can heartily agree with Dr. Hamilton. He says: "one of the greatest misfortunes that can happen to the student is the possession of a large accumulation of badly arranged facts which are stored away in the brain like odds and ends in a garret," (page 17), and we would add that what is only a great "misfortune" for the student is very apt to be literary death to the writer of books.

Defective Medical Education the chief obstacle to a proper application of our profession by the public, and what our Alma Mater is doing to remove it. Annual address before the Society of Alumni of the Medical Department of the University of Pennsylvania. By WM. A. B. NORCOM, M. D., of North Carolina.

The theme which Dr. Norcom selected for his address before the Alumni of his Alma Mater was well chosen. It was one upon which he has bestowed much useful thought for many years. His enthusiasm in the cause of medical education has marked his professional career, and as a compliment to his qualification, he was for six years entrusted with the most important honor in the gift of the medical profession of his own State,—Examiner in Physiology

in the State Board of Medical Examiners. His review, therefore, of the condition of medical education and the means whereby its elevation will be accomplished are the well-weighed words of an earnest medical scholar.

Dr. Norcom thinks that all the medical schools in the country must soon follow the example of the University of Pennsylvania, and many of them are seriously considering the question of the three-term requisite for graduates. He reviewed the medical courses under the new régime, dropping here and there in passing, hints which give a clew to his own course of study, not forgetting to inculcate some pathological formulæ which he holds as cardinal in the practice of physic.

If the newly graduated doctors caught any of Dr. Norcom's enthusiasm for study, they will surely go the fountain heads of learning with avidity.

North Carolina is too sparsely settled to sustain a Medical College, but the medical profession has been almost the pioneer of a higher educational standard as is evinced in her Board of Examiners established in 1859, and the University of Pennsylvania could not have selected a speaker sounder on the question of medical education than Dr. Norcom. We have read this address with great pleasure, and hail it as the harbinger of that better day coming, when the rank of American Colleges will be equal to the best in the world.

We congratulate Dr. Norcom upon his earnest manly efforts for the cause he espoused, and hope every North Carolina doctor may read his address with the same amount of pleasure it has given us.

A Treatise on Physiology and Hygiene for Educational Institutions and General Readers. Fully illustrated. By JAS. C. HUTCHINSON, M. D., President New York Pathological Society, &c., &c. York. Clark & Maynard, 5 Barclay St. 1878. Pp. 270,

To write a work of this sort embracing an account of the functions of the different organs of the body, without falling into clap-trap moralizing, seems to be a difficult task for authors of popular treatises, of this character. Dr. Hutchinson has succeeded in his task, and no doubt his work will meet with popular acceptance. The illustrations are copious, and cannot fail to attract and help the students for whom it was written.

THE OBSTETRIC GAZETTE. A Monthly Journal devoted to Obstetrics and Diseases of Women and Children. By Edward B. Stevens, A. M., M. D. No. 1. Cincinnati. July 1878.

We anticipate in this handsome Journal a most welcome visitor to our office, judging by the appearance of the first number.

ROKITANSKY.

Baron Rokitansky is dead. So little is medical merit remembered and recognized by the public that within twenty-four hours of his death the father of modern pathology was described in the journals as "an eminent German *physician* and author of several well-known medical treatises."

Had his death occurred a few years later, Rokitansky would probably have figured as a "once popular practitioner and father of the well-known opera singer." * * * * *

Rokitansky's death takes away one more of the "strong" men who made the Vienna school so famous twenty or thirty years ago. There are now left only Skoda, Hyrtl, Hebra, and Sigmund, and of these Skoda has lately been almost at death's door, and Hyrtl has sulkily retired into the country. All of them were originals in their way, and Vienna cannot and will never be able to replace them. Their successors with the exception of Billroth, are much weaker men, and some of them are more intent on cajoling fees out of foreign students than on performing good scientific work. The Vienna school, in short has been demoralized by American gold.—*London Medical Examiner*.

CAN SYPHILIS BE PRODUCED FROM HEIFER VACCINATION.

The London *Lancet* contains several editorial articles on this question, endeavoring to maintain the affirmative, in a very confused and lame manner, and not offering a single fact in evidence. Our esteemed correspondent, Dr. Warlomont, of Brussels, chief of the State Vaccine Department of Belgium, has been appealed to, and writes as follows:—

"BRUSSELS, July 7th, 1878.—This is my answer, in reply to yours of yesterday. 1. If one inoculate syphilis to a calf, the latter does not take it; the virus dies on the spot. If one inoculate syphilitic vaccine to a calf, the syphilis remains outside, and only

vaccine develops itself. The latter is certainly free from any trace of syphilis. 3. Heifer vaccine, whatever be its source, can never, therefore, give syphilis, in virtue of the saying—

‘ La plus jolie fille du monde,
Ne peut donner que ce qu’elle a.’

‘That does not mean that vaccination in its performance cannot transmit syphilis when the calf is the agent. When one vaccinates at the same time several children, the lancet may, if that instrument be used, bring to the pustule some contaminated blood, which will then be transmitted to another. To avoid this, care only is wanted.’—*Medical News*.

BOOKS AND PERIODICALS RECEIVED.

Sweat Centres ; The Effects of Muscarin and Atropin on them. By Isaac Ott, M. D. G. B. Wood Field, Student of Medicine. Reprint from Jour. of Physiology, Vol. 1, Nos. 2 and 3.

The Soft Palate. Its value in Diagnosis as compared with the Tongue in Derangements of the Liver, Malarial Diseases and Exanthematous Fevers. By Wm. Abram Love. M. D., Professor Physiology Atlanta Medical College, &c. Reprint from Trans. Med. Association of Georgia.

Annual Address to the Society of Alumni of the Medical Department of the University of Pennsylvania, March, 1878. By Wm. A. B. Norcom, M. D., of North Carolina. With the Proceedings of the Alumni Meeting of 1878, pp. 64. Collins, Printer.

The Obstetric Forceps : When and how to use it. By Geo. J. Englemann, M. D., St. Louis, Mo.

The Hystero-Neuroses. With especial reference to the Menstrual Hystero-Neurosis of the Stomach. By Geo. J. Englemann, M. D. Reprint from Vol. II, Gynæcological Transactions, 1878.

A Hystero-Psychosis. Epilepsy dependent upon Inversions of the Cervix Uteri. By Geo. J. Englemann, M. D.

How We See : With account of the different errors of refraction, and a more particular consideration of the influence of school life in the production of near-sightedness. A lecture delivered before the University Normal School at Chapel Hill, July 31st, 1877. By Richard H. Lewis, M. D., of Raleigh.

The Pith of the Dried Corn-Stalk as a Uterine Tent ; and general remarks upon the use of uterine tents in gynæcological practice, with cases. By W. T. Goldsmith, M. D., Atlanta. Reprint from Trans. Med. Association of Georgia.

Amputations and Excisions of the Cervix Uteri, their indications, &c. By J. Bryne, M. D.

Cholecystotomy for the Removal of Gall-Stones in Dropsy of the Gall-Bladder. By J. Marion Sims, M. D. Reprint from Br. Med. Journal, 1878.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D., } **Editors.**
THOMAS F. WOOD, M. D., }

Number 3. Wilmington, September, 1878. Vol. 2.

ORIGINAL COMMUNICATIONS.

WHY SHOULD WE USE THE METRIC SYSTEM?

By EDWARD WIGGLESWORTH, M. D. Boston, Mass.

MORALLY AS HUMANITARIANS,

Desiring the greatest good of the greatest number, whose God-given best it is to act well our part in life, thus promoting universal harmony. Even should our selfish ends not be furthered in the least by the adoption of the international decimal system, we should yet gladly adopt it if the nation, as a whole, is to be benefitted by its introduction, and of this there is no doubt. The most virulently conservative exponents of the vis inertiae of egoism admit that "in commerce where we are dealing with large quantities, and where large columns of figures, whether expressing weights, measures or money, must be added up, divided or otherwise treated as an arithmetical factor, the metric system is a perfect marvel of elegance and simplicity."

INTELLECTUALLY AS BROAD-MINDED FRIENDS OF PROGRESS.

It is the paradox of education that we must build from above

downwards. Important measures originate among the upper classes which alone are fitted to comprehend the ultimate results of these. The benevolent despot may even educate at the point of the bayonet, and that at once, raising his vassals by intellectual platforms; the genius of republican institutions demands the gradual elevation of the masses by wheedling them up one intellectual step after another with the proffered bait of immediate selfish advantage. The independent American of the lower class loses several trains on the railroad of progress while being persuaded of the inferior elements of pedestrianism. John Quincy Adams, even in his day, spoke of the metric system as "the greatest invention of human ingenuity since that of printing." Charles Sumner characterized it as "among the choicest possessions of an advanced civilization."

SOCIALLY, AS PATRIOTIC AMERICAN CITIZENS.

For in spite of popular education, illiteracy is increasing faster than population. It has been calculated by large committees of our ablest teachers that the complete introduction of the Metric System will save a full year of the school-life of every child, and this year thus saved, would be enough to turn the scale. In a country depending for the safety of its free institutions upon the education of the people, this fact is of vital importance. The introduction of this system would be desirable, if only as the most rapid method of obtaining the most correct results, even were we subsequently to change the denomination of these results back into the old denominations.

PRACTICALLY, AS ECONOMICAL AND COMMON SENSE MEN.

The system being the most accurate, consistent and convenient one known, simpler than others, as our money is simpler than pounds, shillings and pence; multiplying and dividing by a mere shifting of the decimal points to the right or left; giving finer subdivisions than other systems and saving money in business to such an extent that the London Northwestern Rail Road alone reports an annual saving of ten thousand pounds sterling by the use in computation of the metric, instead of the old system. How vast then would be the saving in the entire business of the country.

In 1860 the business of the United States equalled \$762,000,000: of this, \$700,000,000 was with nations using the metric system, and that too before Germany had adopted it.

There are no tables, scales or complicated relations, the meter measuring every possible dimension, the liter every capacity, the gram every weight.

In the old systemless system of many and various units the multiple might be 20, 3, 8, 12, $5\frac{1}{2}$, 27, $2\frac{1}{4}$, etc. Even single weights varied among themselves as e. g. long and short avoirdupois weight. So with measures of capacity, a barrel of fish is 30 gallons; one of ale, $31\frac{1}{2}$; one of cider, 32; one of beer, 27; etc. Bread is sold by troy weight, butter by avoirdupois. Druggists buy by one and sell by another and a different table of weights.

With the exception of measurement of time, which are unalterable, being natural divisions fixed by the revolutions of the earth, there is none to which this system is applicable, whether of weight, length, surface, solid contents, angles, values, interstices or forces.

PHILOSOPHICALLY, AS ACCEPTING THE INEVITABLE.

For the metric system is sure to come and we shall never be better able to make the change than now. We must use it as a means of education now, as a result to which we are to grow by degrees. Every civilized nation has adopted it except Russia, which has been delayed only by her war, and England, which never makes any change until forced. She was only 400 years behind the continent in adopting our present arithmetic. Yet, even in England it is legalized and makes annual progress in the British Parliament. Our scientific men all advocate it. Our Congress has legalized it. Large manufacturers and merchants in foreign trade use it more than is generally known. Civil engineers, architects, and chemists employ it. It is exclusively used by the U. S. Coast Survey and Marine Service. The American Medical Society and the Medical Societies of the leading States have recommended it by resolutions most cordially. And finally should we delay long, commerce with an immigration from foreign countries will force it upon us. Moreover, it is practically indestructible, whereas the standard weights of Great Britain were destroyed by fire in 1834. There are 27 standards of the metric system in different countries, the United States possessing one. These are exactly alike, from a single casting of 10 parts iridium and 90 of platinum. Nothing short of a cosmic convulsion could destroy all of these at once.

PROFESSIONALLY, AS PHYSICIANS.

Because this system most nearly approximates to a perfect one, embodying as it does, the most careful and delicate work of the International Metric Commission composed of scientific men from all countries.

Because it is *international*, and medicine is as cosmopolitan as human nature itself.

Because of its great *convenience* in writing and compounding prescriptions, in dividing doses and in computing quantities required during given times.

Because of its *safety* due to its *uniformity* and *simplicity*. It may be learned in five minutes. In complexity there is always danger, and the resemblance of the signs of the scruple, drachm and ounce has already proved fatal to human life. The metric system dispenses with the signs of the quantities, employs Arabic figures instead of Roman numerals and assures the physician of more competent service, because from more educated pharmacists. It is decimal and a perpendicular line instead of the decimal points obviates any possibility of error from this source. It is allied to the change already made by Americans from pounds, shillings and pence to dollars and cents.

Because of its *delicacy* and *accuracy* for the chemist and pharmacist, and here the beauty of the system is specially apparent for it provides denominations or weights applicable to the smallest quantity which the physician can prescribe, the old grain being by far too large and coarse a unit for modern medicine. Moreover, the English and American graduates are both in use in this country, and yet are not alike. There is a difference of 18 grains in the weights of their fluid ounce. Then too it is united before the ounce symbol, either the graduate or troy ounce may be used.

Because it deals preferably with weights alone, *while admitting the use, if desired, of both weights and measures as at present.*

DROPSY OF THE AMNION.

By J. A. REAGAN, M. D., Weaverville, N. C.

I felt it a duty for some time to report a very remarkable case of this disease which I encountered in my practice, but having no Journal in our State, until yours was started, I have neglected it until the present time.

I was called to see Mrs. E., September 10th, 1866, who was attended by Dr. Reynolds, since dead. I found her the largest *small woman* I ever saw. On examination, I at once diagnosed the case dropsy of the amnion, and sent a messenger for the attending physician. While he was gone, a distance of five miles, I was called to a case of obstetrics. Dr. Reynolds not being at home, another physician was brought, whom I failed to meet, on account of the case above named. He, however, left a note for me, stating that he believed it to be general anasarca, and advised against an operation in any way.

On the morning of the 13th, three days after the visit named, I found her suffering very much. Being satisfied that the physician named was in error, and regretting that I could not have met him, I took the case. The lady could not eat, sleep or have any ease in any way, or in any position, the pressure being so great. Hence, I determined to assume the responsibility and puncture the sac, through the os uteri, which was dilated to the size of a three cent piece. I wrapped a small bistoury to within a half inch of the point—placed the point under my finger nail,—entered the womb per vaginam, through the dilated os, and punctured the sac. While I was unwrapping my bistoury and drying it, the lady complained of getting very wet. I returned to her and found a large quantity of water in the bed. I commenced dipping it up, and measured *seven gallons*, besides what was absorbed by her clothing and the bed. She being very feeble I gave her a stimulant, and in about three hours she began to complain of labor pains. I made an examination and found another sac presenting. I punctured this (the os being well dilated) and in a short time a very poor emaciated child was born which seemed to have been dead for some time. In a short time, on examining to see if the placenta was ready to come away, I encountered another sac which I also punctured, and soon

another child was born, in every respect resembling the first. In due time the placenta came away, and I determined to examine it carefully. I found a double placenta, each with its separate amniotic sac, and in addition to these a large sac inclosing both placentæ, and the other two sacs with the children. This large one was the one which contained the liquid above named.

The woman made a good recovery, and on the 5th of November, 1867, I delivered her of a healthy child, without her having had any of her former symptoms. Her health has since been good.

Finding these sacs, caused me to examine more closely for the cause of these discharges of watery fluid from the vagina of pregnant women. Churchill says: "a vaginal examination affords no explanation, as no deviation from the healthy condition of the parts can be detected." This is true, but a careful examination of the placenta, and sac or sacs, will afford a better explanation than is usually found.

I was called to see a Mrs. R., with the sixth child, at the end of the 7th month. She and the bed were very wet. There being no signs of labor, I gave her some medicine to quiet her, and returned home.

At the end of the 8th month the same thing was repeated.

At the end of the 9th month I delivered her of a healthy child. On examination the sac was a double one.

Again, I found a Mrs. H., in like condition at the end of the 8th month, and delivered her at the end of the 9th. Her's was also a double sac, nearly grown together in places.

Hence, in my practice I have encountered two cases of double, and one of triple sacs; all these recovered and did well in subsequent labors. I hope the physicians of our State will cause State pride to actuate them to take an interest in *our Journal*, and report all important cases.

CASE OF DROPSY FROM LOSS OF BLOOD, COMPLICATED WITH INDURATION OF THE LIVER.

By W. C. McDUFFEY, M. D., Fayetteville, N. C.

Mrs. J., aged 40, married, the mother of ten children, always enjoyed the best of health, until the birth of her last child, October.

1877, and from her own account she was rather roughly handled by an inexperienced midwife at that timid time; suffered an unusual loss of blood; immediately thereafter and thenceforward for more than a month the discharge was copious and when it subsided she remained in a very weak, anemic condition, without appetite, shortness of breath, very little secretion of milk. This was her condition when I first saw her, December 6th, nearly two months after her confinement.

There was then swelling of feet and legs, and some abdominal enlargement. I detected with most peculiar distinctness an enlarged liver abnormally hard, with functional disturbance of the heart, and very decided scantiness of urine. I gave her a brisk mercurial cathartic, with digitalis, and repeated it next day and applied a blister over the liver, with such decided benefit that I felt but little concerned about the ultimate results. Finding, however, that notwithstanding the swelling rapidly subsided in a few days, with much relief in breathing, yet the liver remained as hard as ever, with its sharp border actually projecting and easily traced clear around, through the then thin walls of the abdomen. I again applied an extensive blister over it, and gave mild mercurials, alternated with iodide potas., quinine and iron. The blister gave relief, the iron and quinine I had to withdraw; continued the iodide potas. with an occasional dose of calomel; there was still no increase in the quantity of urine. Thus matters stood on the 25th of December, when she became suddenly worse. The swelling reappeared in the feet and legs; œdema of abdominal walls and a tendency to general anasarca. No decided ascites, but the swelling as yet appeared to be confined to the cellular tissues.

At this time there was much palpitation and great difficulty of breathing; she was unable to lie down; the liver as hard as ever though somewhat reduced in size. I resorted again to the digitalis with nitrate potas.; but could get no diuretic effects from them; there was partial relief in the steadiness the remedy produced upon the heart's action. I kept up the use of mercury and gave the muriated tincture of iron, and applied the compound iodine ointment over the region of the liver; but finding no reduction in size nor softening in texture of this stubborn organ, and no increase of urine, I had recourse again to the fly blister, and gave five grain doses of calomel for six or seven doses followed by full doses of compound

powder of jalap. This was about the middle of January. She was relieved again; the swelling subsided; the breathing was better, and she was able to lie down. The appetite was bad and no impression yet upon the kidneys. I kept up the compound powder of jalap, and once a day a dose of calomel, and applied the nitro-muriatic acid bath to the region of the liver and to the feet. She remained at a stand-still for some fifteen days, when again the swelling of the limbs and abdomen began to increase. I made the external application of the fox-glove by swathing the abdomen in a decoction of the leaves; even this produced no visible action on the kidneys, which seemed proof against every measure resorted to in that direction. This left me about where I was at the beginning. My anxiety about the case now, may be imagined, but not described. There was an obstinacy about the liver and kidneys, such a persistent refusal to yield to ordinary remedies, as I had not met with before, and besides the patient was failing in strength. This brings me up to the first of February; still difficulty of breathing, swelling of the limbs and no appetite. I again blistered and this time gave large doses of muriate of ammonia, 20 grain doses—six times a day—and saw but little, if any benefit for several days. At this time, or at least on the 15th of February, Dr. Haigh joined me in consultation, and from this time to the end, he will bear me out in saying it was one of the most stubborn cases, to finally yield, that had been seen in many years. We put her upon eleterium squills and calomel as an alterative, and hydragogue cathartic; this acted well so far as the remedies were concerned, producing free watery evacuation from the bowels, but no softening of the liver or action upon the kidney, although kept up for several days, and besides, we gave the sustaining remedy—so often found beneficial in dropsies of different parts of the body—to-wit: sulph. iron, nit. potas. cinchona and gin. This was fully tried and finding no material benefit, we tried tincture digitalis, alternated with dialyzed iron; slight improvement would now and then give encouragement, but in a few days matters were as unfavorable as before. We applied the blister over the liver and saw an improvement, and after it healed, we applied the nitro-muriatic acid bath again. This in conjunction with alterative doses of calomel; diet nutritious but bland; appetite very irregular, and from the first there was no signs of the menses, though the infant had been put away for two

months, there being no secretion of milk—indeed, there had been but very little milk from the first, and that only for five or six weeks after confinement. There was now much emaciation of the upper extremities, while the swelling remained below. This state of things continued during the month of March. The action of the heart at this time was evidently disturbed by a collection of fluid in the pericardium. We produced a smart eruption with tartar emetic ointment, over the liver and heart and this was continued for some time ; but not diminishing the induration of the liver (though it did give relief to the heart) we again had recourse to vesication by cantharides, and began now to give calomel and bi-carb. soda—3 grains of the former with 10 of the latter. The quantity given altogether, was very considerable—sometimes it was given without interruption for ten days and strange as it may appear there never was the slightest ptyalism from first to last in this case; this was the last remedy used internally. The blistering was repeated, and suddenly it was perceived that the kidneys were actively secreting, the swelling began to decrease and rapidly disappeared, and the liver was found nearly normal. The appetite was good, the patient was bright and the long baffled doctors were as much rejoiced as any member of the family to find at last their persevering labor crowned with success. The last regular visit to this lady was made on the 14th day of April, and from then, to the present time there has been perfect relief; in a week's time she was doing house-work. It is astonishing how rapid and how perfect this cure was. She looks better to-day than she did before the attack.

To epitomize—8 fly blisters were applied over this liver, besides irritation with the acid, tartar emetic ointment and sinapisms repeatedly. Calomel was so often resorted to that the exact quantity given in all is difficult to state. It is proper to say that in combination with the bi-carb. soda it acted better than in any other way, and that there was no impression made upon the kidneys, despite every diuretic tried, until the liver yielded, then, and not until then did the flow of urine become at all copious.

Digitalis fairly tried in this case without diuresis. Specific dropsical treatment of no avail ; ptyalism not produced under the long continued use of mercury. Perseverance in an old and narrow path brought us out at last at the desired haven, for it will be remembered, that the *effectual* means were reduced to about three *long tried* and *well known* remedies.

“ Ask for the old paths and walk therein.”

NOTE ON THE USE OF PLASTER FOR SPLINTS.

By L. McLANE TIFFANY, M. D., Baltimore, Md.

The employment of plaster of Paris in surgery is so universal at the present day, that any hint, however trivial, whereby its application is facilitated, or its usefulness increased, is worth recording. With the above two-fold object I offer the following suggestion for practice :

During the last few years I have used as a reinforcement for plaster splints when great strength was required, strips of wire gauze, cut in appropriate shapes ; very thin, light and pliable, such as is used for window blinds.

The gauze is easily obtained, can be cut with an ordinary strong pair of scissors and adapts itself to any peculiarity of form, however bizarre.

The gauze when imbedded in plaster, forms a splint of sufficient strength to meet all requirements, for the moisture of the bandages, sufficing to rust the iron, forms a cement of greater durability than that obtained by the use of a non-oxydizable metal, such as zinc.

Latterly I have used iron fillings in a number of cases where excessive strength was not required to the exclusion of the gauze. It is dusted over the limb as the various layers of bandage, prepared in the usual way, are applied and rubbed in with the plaster. (Supposing, of course, a limb under treatment.)

Oxydation proceeds rapidly, and within twenty-four hours, the plaster has become a dull red, extremely hard cement.

The weight of the iron required is small and the weight of the plaster which can be dispensed with is considerable, without sacrificing the requisite strength. I do not find that the setting of the plaster is in any way delayed. I have found that the filings, as obtained from machine shops, are more or less mixed with dirt of one kind or another, which greatly impairs the object desired ; by using, however, a magnet to rake the dust with, the iron is procured comparatively pure, for it adheres to the loadstone, from which it may be removed and preserved in a dry, tightly closed bottle.

A CASE OF NASO-PHARYNGEAL POLYPUS.

By WILLIAM R. WOOD, M. D., Scotland Neck, N. C

I send you a naso-pharyngeal tumor which I extirpated from the throat of young A. P. H., of Palmyra, Halifax county, a few years ago. This case has quite an interesting history. The youth in question having undergone several complicated operations with great courage and fortitude before being finally relieved. I first noticed the growth as I then thought of ordinary polypi in his right nostril, as early as the year 1870, when he was only some twelve or thirteen years old, attending school at Vine Hill Academy, Scotland Neck. I very easily extracted them with the ordinary forceps from time to time, but I soon noticed after each successive operation, they returned with increased size, and rapidly assumed a graver character. His father and myself carried him to Tarborough, and placed him in charge of Drs. Pittman and Jones, who, I believe operated on him several times, and under whose treatment he seemed for a time to improve, they having checked the rapid growth of the tumor in right anterior nares and in the antrum for a period. But soon after his return home from Tarborough, I was startled to find a large tumor developing from the posterior nares, extending gradually down into the pharynx, and finally resting upon and almost completely compressing the epiglottis, thus keeping him in a continuous state of semi-suffocation. All efforts of myself and others to relieve him proved abortive and unavailing. A greater portion of the time the only way I could give him sufficient air to sustain life, was by passing a large catheter or reed under the tumor, immediately over the larynx. Under the circumstances, I advised his father to let me take him to Baltimore and place him in charge of my esteemed friend, Professor Edward Warren, late Surgeon-General of the Khédive's army—now of Paris. On my arrival in Baltimore with him, his condition was so critical that Dr. Warren was compelled to perform tracheotomy on him to keep him alive long enough to operate on his throat—finding this to afford but little relief the Doctor proceeded to extricate the tumor at once, which he did in his usual graceful and scientific manner—and as we all thought finally and successfully. Shortly after the operation, I left him under Dr. Warren, where he remained for some two or three

months, if I am not mistaken—returning home in a much improved condition, and to all appearances cured.

In the course of six months after his return the tumor had reappeared, if anything, in a more aggravated form, it being found larger and of a more gristly consistence than before—at times completely closing the glottis, leaving the little fellow gasping and for moments apparently dead. I resorted to every expedient to save my patient's life, being generously assisted by the physicians of the surrounding vicinity, but in vain and without any material benefit to the patient himself. Seeing death inevitable I deliberately resolved to take the responsibility of killing my patient rather than let him die without another effort to save his life. Being kindly assisted by my friend, Dr. M. T. Savage, and Dr. Carson, of Martin County, I proceeded to carry my design into execution. With a pair of curved serrated forceps, I seized the lower, or pendant extremity of the tumor, and raised it out of its bed in the pharynx—thus relieving the impression of the epiglottis and giving the patient the benefit of free respiration during the operation, taking the forceps in my left hand, and holding in my right hand an ecraseur, armed with a loop of doubled annealed steel wire. I passed the loop rapidly over the handle and down the blade of the forceps over the end of the tumor, pushing the loop of wires well behind the soft palate with the end of the instrument and the middle finger of my left hand, until it was pressed finally against the walls of the posterior nares at the base of the tumor. I thus continued to press with the end of the ecraseur and finger, as above described, while Dr. Savage gradually constricted the base of the tumor with the screw of the instrument. Just as the tumor was almost severed from the posterior nares one of the wires of the loop gave way with a snap, confirming a failure by further strain on the remaining wire. I took a hernia knife, passed it along the upper edge of the unbroken wire and finished the operation—though by extirpating the tumor you see before you, weighing several ounces, and at the time of the operation being nearly twice its present size. As the wires tore away the base of the tumor and cleared the posterior nares, the blood spouted from each nostril in torrents, but the hemorrhage was soon subdued by application of sponge cuttings saturated in persulph. ferri. To the surprise of myself, my medical friends, and the friends of the youth himself, he rap-

idly recovered from the operation, and soon regained his general health. All I have since done for him was to prescribe the iodide and bromide of calcium, compound, as a wash, to syringe out his throat and nostrils with. At the time of the operation, May, 1874, he would not have weighed more than 50 pounds. He is now six feet high, weighs 160 pounds, is in good health, hale and hearty, doing a thrifty business, clerking for one of the most successful merchants in the neighborhood. There has never been any sign of the tumor since the operation over four years ago.

SELECTED PAPERS.

EXPERIMENTS ON THE BILIARY SECRETION, WITH REFERENCE TO THE ACTION OF CHOLAGOGUES.

By Professor RUTHERFORD, M. D., F. R. S.*

Professor Rutherford pointed out that clinical observation was very defective in regard to the action of medicines on the liver. It was difficult to ascertain the amount of bile secreted. Some substances resembled the bile in color, as rhubarb. Again, when bile had been secreted, it was sometimes retained in the alimentary canal, especially if the cholagogue were not at the same time a purgative, as was the case with many substances which acted on the liver. Again, it had been proved by his experiments that all medicines which acted as purgatives, but did not stimulate the liver, lessened the secretion of bile. This law had been clearly demonstrated. After reviewing the methods of experimenting upon the liver by former experimenters, as Hughes Bennett, Röhrig, and others, and pointing out wherein their methods were defective or fallacious, Professor Rutherford briefly described how his experiments had been conducted. They were all performed upon dogs in a state of fasting. The animal was fed at 4 P. M., and the experiment was commenced about 9 o'clock the following morning. The

*Paper presented to the Medico-Chirurgical Society of Edinburgh, June 19th, 1878.

animal was kept perfectly still by means of curara, which paralyzed its movements, and artificial respiration was kept up by making an opening into the trachea and introducing a pair of bellows, worked by a small steam engine. The respirations were kept at sixteen per minute. It was necessary to keep the dog in a state of fasting, for when food was being absorbed the hepatic cells were rendered more active. It was necessary to use curara, for chloroform and ether both increased the activity of the liver. Several observations were first made to ascertain how much bile was secreted normally by the liver in a given time. The amount was measured every quarter of an hour, and the experiment lasted nine or ten hours. An opening was made into the abdomen in the linea alba, a canula was introduced into the common bile duct, and the bile was allowed to fall into a fine cubic centimetre measure. The gall-bladder was squeezed so as completely to fill the canula, and a clamp was placed on the cystic duct to prevent the return of the bile into the gall-bladder. It was found that the flow of bile when no substance was applied was tolerably regular, but had a tendency to diminish after several hours, owing to the exhaustion of the liver. The substances were all introduced into the duodenum for two reasons; first, on account of the large amount of mucin in the stomach of the dog; and secondly, because many maintained that the action of cholagogues was due to their irritating the mouth of the common bile duct.

Professor Rutherford experimented with the following substances:

1. *Croton Oil*.—He commenced with this substance because, according to Röhrig, it was the most powerful cholagogue. In one experiment he gave 15 grains, in another 3 grains of croton oil, and he found from these experiments that croton oil was a cholagogue of such feeble nature that it might well be discarded. He tried also the action of water alone, and found that it did not affect the secretion of bile to any notable extent.

2. *Podophylline*.—He injected 10 grains of this substance, and found only a very slight increase of bile, because it acted as a too powerful purgative. In another case he gave 6 grains of podophylline, and there was a very constant rise in the secretion of bile. As resinoid substances were very insoluble unless mixed with bile, which dissolved such substances, he injected 9 grains of podophylline with a little bile, having previously ascertained that such an addition did

not notably affect the secretion of bile. In this case there was much purgation, and for the first half hour the secretion of bile rose enormously, but afterwards fell almost to a stand-still. From these experiments he found that podophylline was a powerful cholagogue. As the experiment occupied a great deal of time Professor Rutherford associated M. Vignal with him in their execution.

3. *Castor Oil*.—This was the next substance tried. He gave one ounce and found that it did affect the liver. On the other hand, as purgation set in there was a diminution of the secretion of bile due to the purgation.

4. *Gamboge*.—He gave 4 grains, and there was no rise, but a decided fall, due to excessive purgation.

5. *Sulphate of Magnesium*.—He gave 60 grains, and after a time another 60 grains, but noticed only a fall in the quantity of bile secreted.

6. *Chloride of Ammonium*.—He gave about 20 grains of this substance four times repeated, and the secretion fell. The effect of purgation was to diminish the bile by draining the portal system. Part of the bile was normally reabsorbed, and especially the sulphur-containing substance, and reconverted into taurocholic acid; but purgatives prevented this by washing away the bile after it had been poured into the alimentary canal.

7. *Aloes*.—He gave 60 grains, and the secretion of bile rose high, and remained so for a long time. Small doses affected the secretion of bile only slightly.

8. *Rhubarb*.—He gave 17 grains four times in the form of infusion, and the secretion of bile rose afterwards. Rhubarb did increase the secretion of bile, but was a feeble hepatic stimulant.

9. *Senna*.—He gave 45 grains five times. It stimulated the liver, but was not a very powerful cholagogue, being accompanied by purgation.

10. *Colchicum*.—He gave 60 grains of the extract, and there was a very high secretion. It was a decided cholagogue, but not a powerful one.

11. *Taraxacum*.—He gave 180 grains of the extract and afterwards 120 grains, and the secretion of bile rose, but so slightly that he concluded that taraxacum was an extremely feeble cholagogue.

12. *Scammony*.—He gave 4 grains and afterwards 8 grains, and found it a very feeble cholagogue.

13. *Euonymin*, a resinous substance obtained from *Euonymus Atropurpureus*. The dose for a man was one to two grains. It was a favorite American eclectic remedy. He gave 5 grains, and in thirty minutes there was a most powerful effect. It was a powerful stimulant of the liver. Professor Rutherford recommended it to be given at night, two grains combined with two grains of hyoscyamus, and in the morning a seidlitz powder. Euonymin only stimulated the intestinal glands, and was a safe medicine.

14. *Sanguinarin*, also an American eclectic remedy, obtained from *Sanguinaria Canadensis*. The dose for a man was $\frac{1}{4}$ to 1 grain. He gave one grain and found the secretion of bile rose. It stimulated the liver. It was a powerful cholagogue, and had a slight purgative action.

15. *Iridin*, another American eclectic remedy, obtained from *Iris Versicolor*. The dose for a man was 1 to 5 grains. He gave 5 grains, and after an hour and a half the secretion ran up very high. It was a powerful cholagogue, and very valuable. He recommended 4 grains at bed time, and a seidlitz powder in the morning.

16. *Leptandria*, a resinous substance obtained from *Leptandria Virginica*, and a favorite American eclectic remedy. It was not a powerful cholagogue, although in large doses it stimulated the liver.

17. *Ipecacuan*.—This substance did not excite the intestinal glands to any extent. He gave 60 grains, and in one hour and a half it raised the secretion of bile enormously. A dose of 3 grains also raised it.

18. *Colocynth*.—This substance stimulated the liver. He gave 8 grains and found it was an undoubted cholagogue.

19. *Jalap*.—Thirty grains raised the secretion of bile. It was a cholagogue, but not a powerful one.

20. *Sodium Sulphate*.—He gave 508 grains, and the secretion of bile was raised. It was not, however, a powerful stimulant of the liver, though it was a decided cholagogue. It was important as forming the chief salt in the waters of Carlsbad, which were known to have a cholagogue action.

21. *Potassium Sulphate*.—Two hundred and thirty-two grains increased the secretion of bile. Owing to its insolubility it sometimes failed.

22. *Sodium Phosphate*.—He gave 77 grains, and again 144 grains,

and it increased the bile. It was a decided cholagogue. Potassium sulphate was also a decided hepatic stimulant.

23. *Rochelle Salt*.—He gave 43 grains and found it a feeble cholagogue.

24. *Common Salt* (Chloride of Sodium) had a slight cholagogue action.

25. *Chloride of Ammonium* was found to lower the secretion of bile.

26. *Sodium Bicarbonate* in doses of 10 or 20 grains produced no appreciable effect on the secretion of bile.

27. *Potassium Bicarbonate*.—Ten or 20 grains produced no cholagogue effect.

28. *Nitrohydrochloric Acid*.—He found that 40 minims of the dilute acid produced a distinct cholagogue effect. It was almost a decided cholagogue.

29. *Jaborandi*.—He gave an infusion of 75 grains, and found it a very slight cholagogue.

30. *Physostigma*.—He gave 1 grain of the extract, and it raised the secretion. He then gave 2 grains of the extract, and the secretion rose rapidly to a great extent. These doses, however, were too high to be safely used in man, and so it could never be used as a cholagogue. Being anxious to find if atropia would antagonize the action of physostigma on the liver, Professor Rutherford gave 4-5ths of a grain of sulphate of atropia, and afterwards 3-5ths of a grain, and the secretion of bile came down to where it was before the physostigma was given, clearly proving that in regard to the secretion of bile physostigma and atropia were antagonistic. Being also anxious to find the effect of atropia alone on the liver, he gave first $\frac{1}{2}$ grain of sulphate of atropia and afterwards another $\frac{1}{2}$ grain, and subsequently 1 grain, and found that the secretion rather rose, showing that atropia had no notable effect on the secretion of bile.

31. *Menispermum*.—This was a resin obtained from *Menispermum Canadense* (yellow parilla), and is not to be confounded with the active principle of *cocculus indicus*. The dose for a man was 5 grains. It was said to be a tonic and aperient. He found that 7 grains had no effect. He afterwards gave 5 grains twice, and found that menispermum produced a notable effect on the secretion of bile. it was not a cholagogue.

32. *Baptisin*.—This was a resinous substance obtained from

Baptisia Tinctoria, or wild indigo. The dose for a man was 1 to 5 grains. He gave 7 grains, and found that it stimulated the liver. It was a cholagogue but not a powerful one.

33. *Phytolaccin*.—This was another American eclectic remedy, used for chronic rheumatism. The dose for a man was 1-8th to 1-4th grain as an alterative, and 1-4th to 1 grain as an aperient. He gave 2 grains to the dog, and it raised the secretion of bile. He then gave 1-10th of a grain of atropia four times, and found there was no antagonism. *Phytolaccin* was a decided hepatic stimulant. It was obtained from *Phytolacca Decandra*.

34. *Benzoic Acid*.—This was a very insoluble substance, therefore we obtained only a very slight effect. He gave 15 grains, with the result of a rise in the biliary secretion.

35. *Sodium Benzoate*.—He gave 20 grains, and the secretion of bile rose rapidly. It was a powerful stimulant of the liver.

36. *Ammonium Benzoate*.—He gave 20 grains, and the secretion of bile rose rapidly. Both these substances had powerful actions on the liver, and were not antagonized by atropia. They were both powerful cholagogues. The salts of sodium, as a rule, were more powerful cholagogues than the corresponding salts of potassium or ammonium, probably because sodium was a normal constituent of the bile.

37. *Sodium Salicylate*.—He gave 20 grains, and the secretion rose rapidly, and to a very high point. It was a certain, rapid, and powerful cholagogue.

38. *Ammonium Phosphate* was a powerful cholagogue, and did not stimulate the intestinal glands.

39. *Tannin* did not produce any notable effect on the secretion of bile.

40. *Hyoscyamus*.—He gave the extract, and found that in large doses it lowered the secretion of bile, but in doses of 2 or 4 grains of the extract it produced no notable effect.

41. *Morphia*.—He gave 1 grain four times. He also gave first 1 grain and then 2 grains of the acetate, and found that this substance produced no effect on the liver. He also found that morphia did not prevent the action of other cholagogues, for, after giving morphia, he administered 20 grains of the salicylate of sodium, and the secretion of bile rose very high.

42. *Acetate of Lead*.—He gave 10 grains five times, and found

that this substance lowered the secretion of bile, and, though it did not paralyze the liver, it had a depressing effect upon it.

43. *Iodide of Potassium* had no effect on the liver.

44. *Calomel*.—He gave 3 grains three times, and found that the secretion of bile became less. Remembering that calomel was soluble in bile he gave calomel with bile. He gave 1 grain five times, and there was a regular fall, due to the effect of purgation. He again gave 2 grains three times repeated, and there was a fall in the secretion.

45. *Corrosive Sublimate*.—He gave 1-20th grain and 1-15th grain several times with water, and there was no cholagogue effect. He afterwards gave it with bile 1-16th grain several times, and the secretion of bile rose. It is a stimulant of the liver. One-eighth grain acts as a powerful cholagogue. He afterwards combined corrosive sublimate with calomel in the proportion of 1-20th grain of the former to 1 grain of the latter. The secretion of bile rose enormously. These two substances combined in the above proportions acted as a very powerful cholagogue. Remembering the theory of Mialhe, that calomel was partly converted in the stomach into corrosive sublimate by the hydrochloric acid of the stomach, he calculated that 5 grains of calomel could not be converted into more than 1-50th grain of corrosive sublimate. He accordingly introduced into the stomach of a dog 5 grains of calomel, and found no effect produced on the liver, nor any purgative effect. On examining the stomach of the animal after death he found the whole of the calomel enveloped in the mucin of the stomach, there being in all cases a large amount of mucin in the stomach of the dog. In conclusion Professor Rutherford stated that his experiments concerned only the secretion, and not the expulsion, of bile. By analysis he had found that when the bile was increased the bile solids were increased. He had not considered by what processes these substances stimulated the liver. He had, however, proved that irritation of the ends of the bile ducts did not increase the secretion of bile, because he found that some substances, as gamboge, sulphate of magnesium, chloride of ammonium, &c., powerfully irritated the ends of the bile ducts, and yet did not increase the secretion of bile. On the other hand, he found that substances stimulated the liver, but yet did not irritate the ends of the bile ducts. The only substances he had found which lowered the secretion

of bile directly without purgation were hyoscyamus and acetate of lead.

Dr. Keiller, in thanking Professor Rutherford for his valuable communication, stated that this extraordinary paper opened our eyes to the value of the scientific method of studying the actions of medicines.

Professor Fraser expressed the pleasure with which he had listened to this most able communication. It was work of a most important character that Professor Rutherford had done. He praised also the lucid manner in which Professor Rutherford had communicated the results of his labors to this Society. He expressed the hope that Professor Rutherford would prosecute his important researches still further. He stated that the old idea of cholagogues was to increase the flow of bile, not the amount of its secretion. We required to remove the bile. He concluded by moving that a special vote of thanks be given to Professor Rutherford for his very valuable and able communication.—Dr. Craig, in seconding the motion, stated that he quite endorsed all that Professor Fraser had said in regard to the value of this communication. It was one of the most important communications that had been made to a medical society for many years, either in this or any other country. It was not, however, a paper which admitted of much discussion, inasmuch as Professor Rutherford had demonstrated to the profession the action of very many substances on the largest gland of the body. A special meeting had been called to hear this important communication, and he quite agreed with Professor Frazer that a special vote of thanks ought to be given to Professor Rutherford.—Dr. Smart said that we had here a series of most brilliant investigations. Dr. Shand, the Secretary to the Society for the Prevention of Cruelty to Animals, stated that he was here to-night, not as the Secretary of that Society, but as a member of the Medico-Chirurgical Society. He praised Professor Rutherford's communication, and stated that if the members of the Society for the Prevention of Cruelty to Animals only knew the value of such experiments as those which had been performed by Professor Rutherford he would not have to listen to so many useless arguments at the meeting of that Society. He heartily concurred in the special vote of thanks to Professor Rutherford.—Professor Grainger Stewart stated that the paper contained confirmation of much clinical experience. He recommended

1 grain of the chloride of ammonium to be given with each minim of tincture of perchloride of iron when iron disagreed with the stomach. This was good clinical practice. He praised the use of iridin, ipecacuan, and a combination of calomel and corrosive sublimate. These were very valuable. He also praised the benzoate of sodium. Dr. Keiller, in formally conveying the thanks of the Society to Professor Rutherford for his able and very valuable paper, said that this communication, as was stated by Sir Robert Christison at the meeting of the Royal Society on Monday evening, would hand down Professor Rutherford's name to distant posterity.

Professor Rutherford, in reply, thanked the members of the Society for the kind way in which they had received his paper.—*London Medical Examiner*.

THE INFLUENCE OF MALARIA ON THE LIVER.

By JOHN SULLIVAN, M. D., M. R. C. P., London.

Marsh miasma, when absorbed, infects, impregnates, and poisons the blood, and this modified blood is the cause of the anatomical lesions which we may subsequently observe in the organs of circulation, more especially in the spleen and liver, two organs most directly concerned in the formation and depuration of the blood. Still, no lesion may be found characteristic of the condition of these organs in marsh fever, and this may arise from the mysterious and occult nature of malaria, which may direct its immediate energy to the very principle of life itself, rather than to the organs by which the functions essential to life are performed.

Blood-poisoning, and the consequent modification it produces in the nervous and vascular symptoms, in the vital organs, both as to their color and consistence, is the primary and essential effect of the poison of marsh malaria on the human body. The corpuscles of the blood and albumen are diminished in quantity, that of the fibrin is not increased; there is loss of solid, and increase of watery matter. Hence the anæmic condition of the blood, the loss of muscular power, the serous infiltrations, the tendency to hæmor-

rhages and extravasations of blood, which often produce softening, with enlargement and even rupture of the spleen.

The venerable founders of the art and science of medicine, so profoundly accurate in their observations and descriptions of disease, based upon the study of nature and nature's laws, have always regarded the liver as an organ of primary importance in the animal economy, by reason of its size, situation, and important connections. They have described it as an organ not intended for the secretion of bile only, but also for sanguification, depuration of the blood, and generation of heat.

The researches of Magendie, Tiedemann, and more recently of Claude Bernard and other eminent physiologists, have proved to demonstration that the absorption of nutritious matter from the intestinal canal is not confined to the lacteals and thoracic duct solely, but that part is conveyed by the portal vein to the liver, where it undergoes important changes before it enters the circulation.

It is of importance to examine and inquire into the evidence on which the liver founds its claims to be regarded as an organ, independent of bile secretion, of sanguification, and depuration; because on the supposition of the truth and reality of such evidence are we able to explain the nature and origin of the most important symptoms and sequelæ peculiar to marsh fever and marsh cachexia.

The liver is capable of separating from the starch, sugar, and albumen, of the food, a substance—glycogen—which is a transition or modification of glucose, convertible into sugar when brought into contact with an animal ferment, as saliva, blood, etc. This glycogen is deposited into the secreting cells of the liver, and is consumed by the tissues during the intervals of fasting. It has been proved that no part of this glycogen passes through the biliary ducts, for bile contains neither glucose nor sugar. One portion passes as sugar to the right heart through the hepatic vein, from thence to the lungs, to be consumed in the process of respiration. The remaining portion of this glycogenic body contributes to the formation of cell-growth, and of the white corpuscles of the blood. Wherever cell-growth is active, whether in the animal or vegetable kingdom, glucose may be always detected. Hence, blood taken from the hepatic vein abounds more in colorless corpuscles than when taken from the portal vein after it leaves than before it enters

the liver. The elaboration of glycogen may therefore be considered as the first stage in the assimilation of the starch, sugar and albumen of the food. Therefore sanguification is one important function of the liver.

Secondly, the liver is an organ of depuration: it removes from the product of digestion certain nitrogenous matters, which it disintegrates and converts into a soluble urea, to be eliminated by the kidneys. Blood in the portal contains far more fibrin than the blood of the hepatic vein. It has been calculated that more than sixty ounces of fibrin are subtracted in the course of twenty-four hours from the blood during its passage through the liver and the digestive organs. The liver disintegrates the fibrin. Whenever this disintegrating and depurating function is impaired, fibrin accumulates in the blood, as may be observed in some diseases, as rheumatic fever, characterized by an excess of fibrin in the blood.

Owing to the solvent properties of the bile acids, the red corpuscles of the blood part with their coloring matter, or hæmoglobin, which is excreted by the urine. The variety of shade in color which the nitrogenous ingredients of the urine present depends, according to Bence Jones, "on the different degrees of oxidation in the pigment of the bile." The urea becomes variously tinged with the coloring matter of the blood. Urea is the product of the disintegration of nitrogenous matter in the liver. If this disintegrating function be interrupted, then the oxidation necessary towards the formation of urea is insufficient, and instead of a perfectly formed urea we have a deposit of lithic acid or lithates in the urine. These urinary deposits will vary according to the peculiar diathesis of the constitution, or to the degree of oxidation which the organic powers may be capable of maintaining. Whatever causes, therefore, calculated to interfere with the function of the liver, or to damage its structure, such as frequently occur in the diseases of hot climates, in those especially derived from the influences of marsh malaria, will give rise to an incomplete metamorphosis of nitrogenous matter, and consequently to an incomplete urea.

If the texture of the liver be diseased or destroyed, we may have a total suppression of urea, and any brain or nervous symptoms that may subsequently follow must be attributed to uremic poisoning, not to the absorption of bile, since we know from experience that

the blood may be charged with bile, and nevertheless all nervous symptoms be absent.

When the liver is irritated or congested, with an increased activity of its secreting cells, we may have an increase in the function of disintegration, increased oxidation, and increased heat, and consequently an increase in the amount of urea and the lithates. Phenomena of a like nature may be observed in the spleen when first exposed to the action of marsh malaria. The organ becomes congested, and enlarged in volume; its function over-stimulated, and the appetite is voracious. But if the spleen be exposed to the repeated and persistent influence of the poison, by which its texture becomes altered and degenerated, there will be loss of appetite from degenerated functions, and an incurable dyspepsia. Baccelli, the distinguished Professor of Clinical Medicine in the University of Rome, believes that the spleen acts a very important part in the process of digestion, by supplying to the pepsine glands of the stomach, through the *venæ breves*, the hydro-carbon materials necessary for their secretion.*

The influences of malaria acts differently on the tissues of the liver and of the spleen. The first becomes congested, enlarged, hypertrophied, but indurated; the second, enlarged but softened. In the former, induration is the rule, softening the exception; and softening in the liver corresponds with diminution in volume. In marsh cachexia the tissue of the liver assumes a variety of shades of color, the effect rather of altered secretion than of circulation. In such cases we find large quantities of *pigmentum nigrum*, which gives origin frequently to dysentery and diarrhœa. According to Griesinger, diminution in size of the liver is the result of pigmentary embolism, and sometimes of fatty degeneration. Depuration of the blood is therefore another recognized function of the liver.

Now, all these various processes of disintegration, bile formation, and oxidation must be accompanied with an evolution of heat. Hence we find that the temperature of the liver exceeds that of the average temperature of the body. The temperature of blood in the hepatic is considerably above that in the portal vein. As heat is given off during the process of disorganization, and absorbed in that of organization, it follows, as Dr. Murchison says, in his classical and highly practical lectures on the "Functional Diseases of

*North Carolina Medical Journal, Vol. 1, p. 395.

the Liver," the disintegrative processes in the liver are in excess of the formative. The liver, therefore, is a great centre of heat. Hence, we may conclude that the opinion entertained by some among the fathers of medicine, that the liver is not only a bile-secreting organ, but also an organ for assimilation, blood depuration, and the generation of heat, has been confirmed by the experiments and investigations of the most distinguished physiologists of modern times. The mechanism of a gland so complex in its organization, with functions so varied, is easily deranged when exposed to the influence of the poison of malaria which determines to that blood in the formation and preservation of which the liver is so essentially concerned. This subtle emanation from vegetable decay and fermentation cannot be appreciated by the senses; it evades all physical enquiries and chemical analysis. The human system is the only field for its energy. It is by the series of disorders which it produces in this system, constant though varied, that we are enabled by induction to attribute their origin to the influence of marsh malaria. Exposure to this poison is followed by vaso-motor irritation with arterial contraction, succeeded by vaso-motor paralysis and arterial dilatation.

These phenomena produce a febrile explosion represented by three stages, each one being the natural sequence of the preceding. In the first or cold stage, or that of concentration or congestion from arterial contraction, the blood is determined from the periphery to internal organs, the spleen suffers from hyperæmia, is enlarged and softened, the liver is congested, enlarged and indurated, bile is detained from contraction of the bile-ducts, the portal and venous system is obstructed and clogged. Thus the materials which go to supply the liver for the due performance of its functions are cut off, the functions of depuration and disintegration is arrested; the surface of the body is cold, pale, and livid; the patient feels a sense of weight and oppression, he shivers and trembles all over.

To this succeeds the second, or stage of heat and reaction from nerve-paralysis with arterial dilatation. The detained blood bursts its barrier, flows with violence, giving rise to tension and pain in the head, increased respiration and oxidation, to increase of heat and increase in the functions of the liver, and general pyrexia.

In the third, or stage of elimination, nerve-paralysis is exaggerated; to capillary exhaustion succeeds sweating and restoration of

the function of all the vital organs, until a fresh accumulation of the poison takes place, either from continued exposure, or from its action in a latent or masked form. Should contact with this poison be repeated or continued, should it be concentrated or intensified by climate or endemic causes, then to hyperæmia will succeed hypertrophy of the liver, or a specific inflammation may result to terminate in abscess, suppuration, cell-destruction, or acute atrophy.

I have never yet been able to trace inflammation or abscess of the liver in marsh fever, unless there had existed previously some recognized or hepatic disease. A healthy man in a tropical climate may fall a victim to an aggravated form of malarial fever, and yet have no affection of the liver, although constant exposure to malarial causes and to great heat will predispose the liver to disease. The physiological conditions which retained the blood in its normal state, suited to a cold, are broken when exposed to a hot climate. It follows that all previous conditions of health become greatly modified, or a source of danger, on our removal to the tropical zone. Certain functions, as those of respiration and digestion, are diminished ; while others, as those of the skin and of the liver, are increased. From an increase in the functional activity of the liver results the frequency of its lesions ; and no morbid cause is more capable of increasing this functional activity than a constant exposure to great heat.

The poison of malaria affects the texture and functions of the liver. The subject of marsh cachexia is jaundiced, because the normal metamorphosis of the bile is interfered with. He is pale and anæmic ; his heart beats with a sense of suffocation and giddiness ; his gait is slow and painful ; he is sad and careworn ; he labors under ascites or serous infiltrations ; he is subject to alternations of heat and chills, because the process of oxygenation in the liver and the functions of sanguification and of depuration of the blood are interrupted.

A patient who suffers from a structural or functional disease of the liver through the continued, but slow and insidious, operation of marsh malaria, may drag on a painful existence for months and years. He relapses, he declines, and finally succumbs to the influences of a melancholy cachexia.—*London Medical Times and Gazette*.

THE CAUSATION OF TYPHOID FEVER*.

By GEORGE E. WARING, JR., M. D., Newport, R. I.

The long-continued and somewhat thorough investigations of the ultimate methods of the causation of this disease have failed of a scientifically accurate result. The question whether typhoid fever always springs from the presence of specific poison produced by a parent case of the disease, or whether it may, under certain circumstances, arise *de novo*, is still in doubt. It is hardly worth while, in a paper prepared for the use of medical practitioners, to restate the facts and observations which support one or the other of these theories ; this would lead only to the inconclusive result which has always thus far attended the discussion.

By far the majority seem to sustain the opinion of Dr. Budd and his followers, that the disease can originate only from the presence of a specific poison produced by a previously existing case. It should be remembered, however, that as most physiological investigators have confined their observations to dense communities, where the disease has prevailed, their observations are more or less clouded by the probability that previous cases have had an influence upon those under consideration.

Although their number is far smaller, other investigators have devoted themselves entirely to very sparsely settled districts, whose isolated families have so little communication with the rest of the world and with each other that it is easy to determine the exact circumstances of contact. One occurrence of typhoid fever in a house standing miles away from all others, where it is rare that any member of the family goes from home, and where a visitor as rarely comes, furnishes strong presumptive evidence of the correctness of Dr. Murchison's theory of a possible *de novo* origin.

To show the testimony upon which opinions are based, we may cite the instances described in various reports of the Massachusetts State Board of Health. In that State the annual deaths from this disease are about one in one thousand, and it is estimated that one-tenth of the cases are fatal ; so that about one per cent. of the population are attacked by the disease. There, as elsewhere, typhoid is peculiarly a disease of the country rather than of the town. The

*Prize Essay. 1878. Rhode Island Medical Society.

observations of ten years show that among a population of 1,044,294 persons, living in large towns, the typhoid death-rate was 0.755; and that among a population of 213,468 persons, living in small towns, the rate was 1.189.

The case is reported of a house in Hadley, built by a clergyman, where a well existed in the cellar into which foul air from the sink drain had access. Vegetables were kept in the cellar; the windows were never taken out; there was no escape for the foul, damp air; and water stood in drops upon the ceiling and walls.

“After a few months’ residence in the house the minister’s wife died, of fever, so far as I can learn. He soon married again, and within one year of the death of the first wife the second died, from, as I understand, the same disease. The children were also sick. He lived in the house about two years. The next occupant was a man named B——. His wife was desperately sick. A physician then took the house. He married, and his wife died of the fever. Another physician was the next tenant, and he, within a few months, came near dying of erysipelas. All this while matters had remained as before described with reference to ventilation. A school teacher then rented the house, and tore up the closed box, but did not cover the well. This was about eight years after building the house. The sickness and fatality were so marked that the property became unsalable. When last sold every sort of prediction was made with reference to the risk of occupancy, but, by a thorough attention to sanitary conditions no such risks have been encountered.”

The case of the Maplewood school, at Pittsfield, fully and thoroughly reported upon by Drs. Palmer, Ford and Earle, is too well known to be detailed here. Of seventy-four resident pupils, sixty-six had illness of some sort; fifty-four had well-marked typhoid fever. Of the whole family of one hundred and twelve persons, fifty-six had typhoid fever, and sixteen of these died. The cellar was used for storing vegetables; the privy vault communicated with the main hall of the building; the kitchen drain discharged near by; the privy vaults were filled nearly to the surface; and, in the summer season, the house was pervaded by foul odors. The school was dismissed; the sanitary condition of the establishment was thoroughly improved, and the institution became and has remained free from the disease.

In a boy’s school in Pittsfield the well stood under the wash-

house, and was fouled by the leaking drain. Coinciding with this condition there was a serious outbreak of typhoid. The well being closed, and the water supply being taken from another source, the fever subsided. In another instance, men engaged in draining a meadow drank from a well supplied only from the water of the meadow, and were attacked under circumstances which seemed to connect the disease with the drinking of this water. In another an attack followed the drinking of water from a sluggish brook fouled by town sewage.

Evidence is given in these reports of outbreaks which were traceable to the tainting of an air-box, which supplied a furnace, by exhalation from the house drain; by the draining of a mill-pond which contained *no* sewage matters; and by the proximity of a stagnant ditch which had no obvious source of excrementitious fouling.

In Sutton an outbreak of typhoid coincided with the flow of barn-yard waste into a well three rods distant on the occasion of a sudden thaw.

The correspondent from the town of Oxford says: "So firm is my belief of this (referring to exhalations from foul drains, cellars, privies, and pig-sties) as a cause of typhoid fever that when I meet with a case of typhoid fever, not readily traceable to some of these causes, I infer that the truth has not been told me, or that my perceptive faculties have been at fault."

At Martha's Vineyard and in Newton there seems to be evidence that the prevalence of typhoid is effected by geological conditions, clay subsoil or underlying rock covered with rich soil favoring the disease. The very local character of most epidemics indicates defects of soil rather than of air. A physician in Pittsfield reports four cases and one death occurring among charcoal burners occupying two houses standing high up on the mountain side, and supplied with pure spring water. The first case had been exposed to no other than local agencies. The house was built into the hill-side, and on its upper side there was a foul pool of house-slops standing several feet higher than the level of the floor. This seemed to have caused the first attack of the disease, which subsequently extended to the other house, there being frequent communication between the two. The outbreak took place in August, when the windows overlooking this foul water were probably kept open. At

Coltsville, slops were thrown out near the well, and a foul barn-yard pool stood near it. The condition of the well was the only traceable cause of the disease which followed. In another case the fever occurred after the use of water from a well near a barn-yard. Indeed, in all of the records of typhoid investigations, here and abroad, there appear innumerable instances where drinking-water wells were contaminated by infiltrations from manure heaps, swill-slops, cesspools, and privy vaults. In other cases, where there has been no conspicuous contamination of the drinking-water, outbreaks of the disease have coincided with the emptying of all mill-ponds for the purpose of repairing the dams. Again, the infection of well-water by the infiltration of soap-suds in which the clothing of fever patients had been washed seems to have caused an outbreak.

One of the most striking examples of investigation of the ætiology of typhoid fever occurring in very sparsely settled districts is to be found in a paper to Dr. W. H. Bramblett, of Newberne, Va., published in the *Virginia Medical Monthly*, May, 1877, page 109. Dr. Bramblett practices along both sides of New River, which flows through a mountainous country broken into numerous valleys and gorges. There are no ponds or marshes whatever, and the elevation is from twenty-two hundred to twenty-five hundred feet above the level of the sea. His investigations lead him to the belief that typhoid fever may originate without the least possible connection with a previous case. He cites seventeen cases, which had seven distinct starting-points, entirely unconnected with one another and with any other traceable source of contagium. The drinking-water seems to have been always pure, mountain-spring water; the privies appear to have been well placed with respect to the house; and, so far as can be gathered from Dr. Bramblett's report, there was an entire absence of all of the conditions which usually attend outbreaks of this disease. The description of symptoms indicates that the cases were all true typhoid fever. Among his conclusions Dr. Bramblett suggests the following: that "typhoid fever often originates spontaneously," or that "the contagium to which the disease owes its specific character originates *de novo*."

In estimating the value of this report it is to be considered that the reporter believes typhoid fever to be directly contagious,—a

conclusion diametrically opposed to the recorded observations of those who have had experience in great fever hospitals.

While the voluminous records of investigation as to the origin of typhoid fever fail utterly to decide the question between those who do and those who do not believe that it can originate *de novo*, and while they have in doubt the question between "living germ" and "specific poison,"—while, in other words, they leave the purely scientific problem still unsolved,—they are full of instruction as to the causation of the disease as we almost uniformly know it in practice. From the point of view, of the medical practitioner, although much is still to be learned, we already know enough for the complete stamping out of typhoid fever as an epidemic. Sporadic cases may still occur, but if the physician knows what he may now learn, if he is energetic in the performance of his duty, and if he is sustained by private opinion and by public authority, he may, in every instance, prevent the extension of the disease to a second subject. Practically, so far as the health of the public is concerned, we may be said to possess already very nearly all the knowledge that we need.

There is no longer any dispute concerning the chief vehicles by which the specific contagium of typhoid fever is conveyed. These are the air that we breathe and the liquids that we drink. Perhaps we may narrow the question still more, and ascribe to the action of the air only the indirect conveyance of the contagium to the stomach; for there are indications that as the contagium of typhoid fever proceeds from disorders of the alimentary canal, so it is only the surface of the alimentary canal which are susceptible to its attack.

The poison of the air may be direct or indirect. That is, it may be due to the exhalations of decomposing matters in dung-heaps, pig-sties, privy-vaults, cellars, cess-pools, drains, and sewers; or it may be due (according to Pettenkofer) to the development of the poison deep in the ground, and its escape in an active condition in ground exhalations. The water, milk, etc., which we drink may be contaminated by the absorption of foul odors from air with which they are in contact, or by the direct admixture of organic matters bearing the elements of infection. There is such a multitude of possible sources and channels by which the infection may be brought to us that it is often almost impossible, in first cases, to determine

which has been actually in operation ; but the original case being established, it becomes comparatively easy to trace the channel of its influence in the production of further cases.

It is with these well-known and clearly traceable agencies of development and communication, by which the initial causation is favored and the extension of the disease insured, that the practicing physician and health officer have chiefly to do. If it is true that prevention is better than cure, then it should be the first care of the physician to insure the absence of all conditions which do or may favor the origin and spread of the disease.

Typhoid fever has in this connection an especial importance, not only as being a wide-spread scourge of almost unequalled magnitude, but as being the typical "pythogenic" disease. Its development and extension are due to conditions which equally promote the spread of diphtheria, diarrhoea, dysentery, cerebro-spinal meningitis, scarlet fever, and the long list of minor ailments which, without destroying life, make living almost worthless,—diseases which undermine happiness, sap the springs of energy, and overwhelm the patient with listlessness and *ennui*. It is the best known and the most widely spread of the long list of preventable diseases ; and as the circumstances which favor the extension and aggravate the character of the whole of these are those which have the strongest influence over itself, so by removing the conditions which foster them we shall do much to restrict its contagion.

All the learning of the ages has taught us no better formula to express a perfect sanitary environment than the old one of Hippocrates : " Pure air, pure water, and a pure soil."

If we would turn typhoid from our doors, and literally stamp it out as an epidemic, we need only to insure this condition in its integrity. We may still import single cases from less cleanly neighborhoods, but it will be our fault if we permit it to attack even one of our own community.

Turning now to the practical bearings of the question, we may safely assume that typhoid fever is not conveyed by simple personal contact with the diseased body. According to Dr. Murchison, in the London Fever Hospital, where two thousand five hundred and six cases of typhoid fever were treated in fourteen and one half years, there occurred during the whole time only eight cases which originated in the hospital. Other instances are as striking, and in

some cases the disease originated in isolated wards, such as small-pox wards, where personal contact was impossible, but where a conveyance of the infection by drains, air channels, etc., was clearly detected.

It may doubtless be assumed that the agency in the spreading of the disease from an original case exists entirely in the dejections from the bowels. Dr. Budd thinks that the surface of the bowels throws off the specific poison, as the surface of the skin throws off the poison of other diseases. The infecting material, whatever may be its character, is believed never to be active until it has undergone a certain development in connection with subsequent fermentation or decomposition of the dejections. Its vitality is very great, and seems little dependent upon circumstances other than the effect of a very high temperature. Dr. J. M. Lazzell, in the Transactions of the Medical Society of West Virginia for 1877, publishes a paper on the contagiousness of typhoid fever, in which he describes an outbreak in the family of one Thomas, which in time produced such terror that no nurse or washer-woman could be induced to come to the house. The bed linen and clothing, soiled with typhoid dejections, were boxed up and packed away. Three months after the disease had disappeared from the country, and when the general health was good, a girl came from six miles distant to do the housework. Among other things she washed this boxed-up clothing. In ten or twelve days she was taken sick, and went home. Dr. Lazzell was called to her five days later, and recognized the same form of typhoid fever that had occurred in the Thomas family. Eleven members of her household were exposed, and eight of them took the disease. It did not attack a single person not so exposed.

The evidence is copious and conclusive that typhoid infection is transmitted often to a long distance, and after the lapse of considerable time, by running water to which the dejections have obtained access.

In Wicken Bonant the stools of a typhoid patient were thrown into a vault which stood near the edge of the brook thirty-five yards above the parish well. The water course carried the infection to the well. Forty-five cases occurred; five of them among one hundred and eighteen persons who did not drink water from the well, and the remaining forty among eighty-eight persons who had no other source of water supply. That is to say, of those who used

the water from the parish well forty-six per cent. were attacked, and among those obtaining water from other sources less than three per cent. were attacked. This statement is taken from the twelfth report of the medical officer of the privy council of England.

I have previously cited the case of the outbreak at Over Darwen, in England, as follows :

“There has recently been an investigation into the origin of an outbreak of ‘filth fever’ in Over Darwen, England, the origin of which for a long time eluded the careful search of the authorities. It was finally worked out by a sanitary officer sent from London. The first case was an imported one, occurring in a house at a considerable distance from the town. The patient had contracted the disease, came home, and died with it. On first inquiry it was stated that the town derived its water supply from a distance, and that the water was brought by covered channels, and could not possibly have been polluted by the excreta from this case. Further examination showed that the drain of the closet into which the excreta of this patient were passed emptied itself through channels used for the irrigation of a neighboring field. The water-main of the town passed through this field, and, although special precautions had been taken to prevent any infiltration of sewage into the main, it was found that the concrete had sprung a leak and allowed the contents of the drain to be sucked freely into the water-pipe. The poison was regularly thrown down the drain, and as regularly passed into the water-main of the town. This outbreak had a ferocity that attracted universal attention ; within a very short period two thousand and thirty-five people were attacked, and one hundred and four died.”

Liebermeister says that typhoid dejections, conveyed in night-soil spread as manure upon the gathering ground of an aqueduct, so contaminated the water supply as to produce an epidemic of typhoid fever among the population using the water.

Similar instances might be cited almost without number. Indeed, there is among investigators no difference of opinion as to the communication of the disease by means of drinking-water thus polluted. There are many instances recorded of the contamination of the water of wells by the transmission of faecal matters through the soil from adjacent privy vaults and cess-pools. One of the most striking of these is that of an outbreak in the village of New Bos-

ton, in Erie County, N. Y., in 1843, investigated and reported upon by Dr. Austin Flint, Sr. From its early date this case is worthy of description here. No case of typhoid fever had ever been known in the county. The community numbered forty-three persons; twenty-eight of these were attacked with fever, and ten died. All of those affected obtained their drinking-water from a well adjoining the tavern; but one family, living in the midst of the infected neighborhood, owing to a feud with the tavern-keeper, did not drink this water, and escaped infection. Two families lived too far away to use this well. This immunity on the part of the enemy of the tavern-keeper led to a charge that he had maliciously poisoned the well,—a charge which resulted in a suit for slander and the payment of one hundred dollars damages. At that time the idea that typhoid fever might be communicated by infected drinking-water had not been advanced; but its truth received strong confirmation from the fact that a passenger, coming from a town in Massachusetts where typhoid prevailed, and traveling westward in a stage-coach, having been taken ill, was obliged to stop at this tavern. Twenty-eight days after his arrival he died of typhoid fever, and thus, doubtless, transmitted in some way to the water of this well the germs of the disease, which speedily attacked every family in the town except the three which did not resort to it for their supply.

Not only does water itself serve as the direct vehicle of contagion, but it has, in several striking instances, caused the serious contamination of milk which had been directly diluted by it, or which had been stored or carried in vessels washed with it. The most noteworthy of the reported cases of this character is that of an outbreak in Marylebone and the adjoining parts of London, reported by Radcliffe in the second number of the new series of the reports of the medical officer of the privy council. Two hundred and forty-four cases were distributed through one hundred and forty-three households. There was at that time no corresponding increase in neighboring districts, and the metropolis generally was unusually free from typhoid. The conclusions arrived at were the following: (1) the outbreak was caused by milk infected with enteric fever material; (2) this milk came from a particular farm; (3) the water used for dairy purposes on this farm contained excremental matters from a patient suffering with enteric fever immediately before

and at the time of the outbreak. Of one hundred and ninety-one cases occurring in nine weeks, one hundred and sixty-seven were in households taking this milk, and only twenty-four in households not taking it.

All evidence points to the long vitality of the infecting material, which lies dormant at times for many months, and then, under favoring circumstances, acts with violence.

Not only does the infection follow the course of water to which it has gained access, or find its means of dissemination in the exhalations of decomposing filth, and thus contaminate the air which we breathe, but these exhalations are readily absorbed by water, which is capable of holding the poison, to the detriment of those who may drink it, and of transmitting it again to air with which it may be in contact. Many cases have been reported similar to that cited by Dr. Carpenter, health officer of Croydon, who traced the origin of an outbreak to the drinking of water from a house cistern, to which air from the public sewer had been led by the pipe serving as an overflow for the cistern.

Especial danger attaches to the use of water-traps, or water held in the bends of waste-pipes, soil-pipes, etc., when these are the only barrier between the interior of the house and a sewer or cess-pool containing typhoid dejections. The retained water absorbs the poison at its outer or sewer end, becomes saturated with it, and gives it off to the air in the house end of the pipe.

The conclusion from the foregoing is clearly this : that the dejections of typhoid patients are always to be regarded as dangerous material, capable of developing and spreading the fatal infection under a great variety of conditions ; that the only sure means for preventing the spread of the disease must be sought either in the speedy, complete and distant removal of the material, or in its complete disinfection. If to be retained in the vicinity of human habitations, it must be disinfected, or subjected to decomposition, under such conditions that its poisonous material shall be destroyed; if it be removed, it must be removed to a point beyond the reach of the community, and to a point where it can in no wise contaminate the source from which drinking-water is taken.

The contagium of typhoid fever is not a poison in the sense in which strychnine and arsenic are poisons,—attacking alike each

body into which it may be introduced,—but, like the contagium of other diseases of its class, it depends upon a certain condition of susceptibility on the part of the subject. This infection, like many others, is inoperative except upon a system prepared to receive it. In other words, we must have not only the seed but also the soil. In discussing the causation of this disease with the practical object of seeking the means for its prevention, we have to regard not only the source of the contagium, the vehicles of its transmission, and the methods of its attack, but in almost equal degree those influences which tend to dispose the human body to succumb. This double condition (that there must be, if not absolutely always, at least very generally, an actual element of contagion, whether germ or specific poison, and also that there must be a state of susceptibility on the part of the subject) greatly improves our chances of success in contending with the disease. We know where the morbid material resides, and so are enabled to avert its approach ; and, on the other hand, we know what conditions of living induce the susceptibility, and so have it in our hands, by improving these conditions, to increase the power of resistance.

So far as the prevention of typhoid fever is concerned, aside from tonic medication, the means to be employed are of a purely hygienic character ; it is a question of the skill of the practitioner as a sanitarian rather than as a physician. He has two objects to attain : first, the removal of the infecting cause ; second, the provision of healthful conditions of living. If the theory is correct that, as Dr. Murchison supposes, typhoid fever may originate *de novo* from the decomposition of organic matter, then the two objects are to a certain extent blended, in so far as atmospheric conditions, which might induce susceptibility, are also capable of causing the disease. In effect, our practice will be safely guided if we regard the two objects as separate and distinct.

Starting with the proposition that typhoid fever is produced only by the operation of a specific cause borne in the dejections of typhoid patients ; that it is innocuous when first voided, but becomes active after a certain exposure in the decomposing fæces ; that it has a great vitality ; that it is capable of being carried by flowing water, by water percolating through the earth, and by the vapor of water floating in the air ; that it may be absorbed and retained and exhaled by water ; and that it may be retained, de-

veloped, and transported by clothing and other articles soiled by its medium, we see that the greatest possible vigilance and the most skillful care are to be applied to the treatment of typhoid dejections. Some of the experiences of England indicate the truth of the statement of the Rivers Pollution Commissioners, that so far as the cause of infection is concerned "filters do not filter and disinfectants do not disinfect." It will at least be safe to assume that in the case of water-carriage the immediate distant removal and the most complete atmospheric exposure are much more effective than any treatment of sewage by the usual methods of filtration; also, that any attempt at chemical disinfection must be more than ordinarily thorough. There is reason to suppose—reason almost sufficient to secure reliability—that the poisonous element is developed and made effective only when the decomposition of the fæces containing it takes place in the absence of a supply of fresh air sufficient to carry it on in the most rapid and healthy way. In other words, active oxidation, whether produced by oxidizing disinfectants, by the operation of atmospheric oxygen, or by the intensified oxidizing power of the contained gases of porous material, seems to prevent decomposing fæces from assuming a condition favorable to the development of infection. The evidence in support of this theory is of course of a negative character, but it is extensive, and, so far as the writer knows, it is accepted by leading physiologists.

Typhoid fever is not produced by exhalations from the surface of lands irrigated with the discharge of such sewers as have a rapid and continuous flow, and thereby deliver all they receive before it has had time to undergo decomposition. There is no evidence that typhoid fever is caused by the contained air of thoroughly ventilated soil-pipes. The most active professional enemies of the earth-closet system have never adduced an instance where typhoid fever or any other cognate disease, has followed its well-regulated use. In the *Lancet* of March 6, 1869, Professor Ralleston, setting forth his objections to the earth-closet, said: "If I am told that the earth-closet is inoffensive, and that the privy is foetid, I answer that a rattlesnake is none the less dangerous because its rattle is removed; and that, for anything shown or known to the contrary, odor is to infection, deodorization to disinfection, what the noise of the serpent is to its." It is nine years since this was written, and

amid all the voluminous reports upon the dry-earth system there is no word to sustain Dr. Rolleston's fears. On the other hand, together with much else of similar purport, the evidence of Dr. Monat reports that in those jails of India where the earth system is used, even at the time of the most serious cholera epidemics, this disease, which is so like typhoid in its mode of transmission, never gains a foothold. One would almost be justified in replying to Professor Rolleston, that it is not a question of removing the rattle, but of killing the snake. Investigations made to determine the manurial value of closet earth used many times over indicate a total and absolute destruction, not only of the odor but of the whole combustible material of the added fæces. The result has shown as complete destruction as would attend burning in a furnace.

This destructive oxidation depends upon the well known concentration upon the surface of the interior particles of aerated porous substances. The intensity of the action is in proportion to the fineness of the material, or, in other words, to the total area of its interior surfaces.

It is perhaps not safe to assume that in dealing with such dangerous material as typhoid excreta treatment with dry earth, or ashes, or charcoal will suffice to render it harmless, but it will be more effective in this direction than anything else of which we have knowledge, and will at least prepare it for safe removal.

The physician in considering the treatment of the material in question has one of two sets of conditions to deal with. The fæcal wastes of the household which he is attending are either removed by water-carriage, or thrown into privy vaults. If by water-carriage, they are delivered into a public sewer or into a cess-pool. Sewers, as they usually exist, and cess-pools always and invariably, are so circumstanced as to favor the thorough development and multiplication of the morbid material under consideration. Unfortunately, sewers and cess-pools are so connected with the interiors of houses, with others as well as with that where the disease originated, as to make them too often the means for converting a sporadic case into a centre of infection. Even the house drains and soil-pipes through which the excrement passes on its way to the cess-pool or sewer are very generally as bad as these final receptacles themselves, while almost always the only barrier to the free return of their air and its poisonous freight into our very living rooms is the water re-

tained by a depression in the pipe (the trap), which water constantly absorbs and transmits the gases presented to it.

Where these water barriers are supplemented with one of the many mechanical check valves recently introduced, this means for the return of the infection is shut off. Where the soil-pipe and drain are freely open at both ends for the transmission of a current of atmospheric air, the danger of the development of the poison is greatly reduced, if not entirely removed. But even here, although we may secure so far as the immediate household in question is concerned, it is to be remembered that, at least in the case of a public sewer and of a cess-pool common to several houses, the matter deposited may produce its injurious effect in other families which are less well-protected against it. Even where the cess-pool is connected with one house only, to permit the specific poison of typhoid fever to enter it and to spread itself through its accumulated filth is to incur a danger akin to that of establishing a gun-powder vault in one's back yard.

When infected fæces are to be thrown into a water-closet or drain they should at least be treated with the strongest and most destructive chemical disinfectants, carbolic acid being by no means sufficiently so.

When the fæces of the household are received in a privy vault, it must be accepted as an imperative rule that typhoid dejections must never, under any circumstances, find access to this. Abundant and conclusive evidence shows that such accumulations of fæces only await the introduction of the least germ of any diarrhoeal disease to become, by means of their exhalations and of their pollutions of the soil, active agencies of development.

Even when the earth-closet system is employed, none of the regular apparatus should be used by the patient, or become the receptacle of his dejection ; this for the simple reason that it should be our first object to secure the most complete isolation of the tainted matter from every substance which might foster the increase of its tainting element.

It would be better, perhaps, to stop with this general statement of principles, leaving each practitioner to apply them according to his judgment, but one is tempted to recommend what one believes to be the most efficient process, and I therefore take the liberty of suggesting that a chamber or bed-pan, filled to the depth of an inch

with dry earth, or with sifted anthracite ashes, or with powdered charcoal, be used to receive the evacuation ; that this be immediately covered with a further inch in depth of dry material, and that the whole be turned into a *shallow* hole in the ground and covered with earth not more than two inches deep, so that it may go through with its decomposition in the upper soil within easy reach of the oxidizing air. If to be removed quite away from the premises, the earth containing the dejections may be thrown into a barrel or box, each deposit being covered with fresh earth, and *carefully protected against rain*.

It would be out of place here to enter in all the details of the hygienic law. In a paper written for the profession this would be, too, a work of supererogation. At the same time it may be advisable, in this connection, to refer briefly to the manner in which, and the degree to which, the general health is influenced by exhalations from decomposing organic matters in sewers, house-drains, vaults, cess-pools, and cellars. It must have been the frequent experience of all physicians that every question as to the tainting of the air of a house from these sources is met by the assertion that no bad smell has ever been perceived. In the first place the accustomed nostril is dull to detect a constant odor, and in the next it is hard to make people believe that where they can smell no offense there still may be danger. We ourselves know that the juices of the cadaver are most fatally dangerous before offensive decomposition has set in. Those who have given attention to the influence of drain air in causing disease know very well that the action of this upon the health bears no relation to the intensity of its accompanying odors.

The only safety is to be sought in the absolute freedom of the air that is breathed, and of the water that is drunk from every species of contamination due either directly or indirectly to organic decomposition. A little rift in the water-pipe of a wash basin, so slight as to be detected only by the application of tissue-paper, has kept a whole family miserable and complaining, and susceptible to every species of contagion, for years together. Decaying vegetables in a cellar, and decaying filth in the waste-pipe of a kitchen sink, may be regarded as the bane of the existence of half the women in America. Those more serious defects which come of ignorantly arranged plumbing work—by no means of good plumbing work,

which is the sanitarian's best aid—are responsible not only for most of the zymotic diseases appearing in the better class of houses, but in like degree for the generally ailing condition of so many of those who pass most of their days and nights in these houses.

The regulation of all these helps to healthfulness is a matter of detail which may well engage the best attention of the profession. Even the cataloguing and classification of the subject here would be impossible. The fundamental principle should always be borne in mind that neither in a sewer, nor in a cess-pool, nor in a house-drain, nor in a soil-pipe, nor in the smallest waste-pipe should decomposition be allowed to proceed without such an abundant presence of fresh air as will secure its most rapid and complete progress. The same condition of obstructed decomposition which fosters the development of infecting agencies is precisely that which leads to a generally unwholesome and debilitating atmosphere. All investigation of this subject, and all discussion of the *modus operandi* by which unwholesome influences lead to the spread of epidemic diseases and to the lowering of the general health, bring us at the end to a firm belief in the principle covered by Hippocrates' prescription : pure air, pure water, and a pure soil.—*Boston Medical and Surgical Journal*.

Bael Fruit in Chronic Diarrhœa.—Sir Joseph Fayrer has been contributing some articles to the *Medical Times and Gazette* on Bael (*Ægle marmelos*) in treatment of chronic diarrhœa and dysentery. As a remedy it has already found its way into the British Pharmacopœia. The preparation employed is the fluid extract, of which from 3 i. 3 ij., may be given at a dose. The *Ægle marmelos* is an aurantiaceous tree, common in India. Its active principle, according to Dr. Christison is certainly not an astringent, as the fruit he tasted had neither aroma nor taste. Sir Joseph Fayrer does not laud it as an unfailing or actively specific remedy, but simply a very useful one.

RULES FOR THE SELECTION OF CASES OF PHTHISIS FOR WHICH TRAVEL MAY BE ADVISED.

In a lecture on Phthisis, one of an admirable series by Jas. Edward Pollock, M. D., &c.; Brompton Hospital, (*Medical Times and Gazette*, July 20th, 1878) we find the following rules :

1. Never permit any patient to travel who is not in the quiescent stage of the disease—or who, in other words, is feverish, with high evening temperature, and the physical signs and conditions already described, indicating the continuous form of phthisis. Observe this rule, and you will be successful ; break it, and your patient and his friends will not thank you.

2. None of the secondary complaints should be present, as continuous or frequent diarrhoea, serious gastric disorder, or laryngeal irritation.

3. Chronic single cavity, with retraction of walls accomplished or proceeding, is favorable for removal to a dry bracing locality, if the hæmoptysical element be wanting in the case.

4. That form of the disease which I have described as diffused deposit in one lung, without much dullness or signs of massing of disease, with pretty large chest, and with moderate emaciation, generally does well on a sea voyage.

5. A first-stage case already chronic does best for travelling about, with frequent change of residence. The complication with bronchitis or asthma is generally much benefitted by change.

6. Persons ought not to travel *at all* with feverish symptoms—with secondary complications—with a large amount of local disease in any stage—with both lungs diseased, with poor digestion and greatly lowered nutrition—or in such a state of weakness or emaciation as to require home comforts, peculiar beds or chairs, or varieties of invalid cookery.

To Prevent Sea Sickness.—F. Peppercorne, L. R. C. P., &c., writes to the *Med. Times and Gazette*, that his brother who had made long sea voyages to New Zealand found that by buckling an elastic belt firmly round the waist, so as to make pressure upon the epigastrium or pit of the stomach, it would quickly relieve sea sickness. [If it is a preventive as well, would not some of the ladies be forearmed ?]

CORRESPONDENCE.

OUR PARIS LETTER.

11 RUE NEUVE DES CAPUCINES,
PARIS, August 21st, 1878.

To the Editors of the North Carolina Medical Journal:

GENTLEMEN :—I am only able to write you very briefly this month, as the condition of my eyes, for the time being, precludes me from employing them by gas-light. When a resident of Egypt, as you are perhaps aware, I suffered fearfully from ophthalmia, and I have occasionally had slight attacks of that disease since my removal to Paris. At this moment my left eye is considerably inflamed; and, with a vivid recollection of past discomforts, I have adopted the precaution of abandoning all night work which calls that organ into special requisition.

Egyptian ophthalmia is, indeed, a terrible malady. I have often witnessed the destruction of an eye in twenty-four hours from its effects. It is almost impossible to find a native who does not present some traces of its ravages. The number of persons who are annually rendered completely or partially blind by it, is something almost incredible. The loss of one eye does not constitute a disqualification for military service in that country; for if it did so, the Khédive would find it difficult to recruit his armies. Some years ago, it is stated, when the wars waged by Mehemet Ali, necessitated an almost continuous draft of soldiers, thousands of the Fellahs permitted this disease to take its course and gladly submitted to the loss of an eye, hoping thereby to escape conscription; but they were disappointed, for the wily old Pasha immediately went to work and organized regiments and brigades of one-eyed men, while he sent the totally blind to work in the quarries.

The exciting causes of this disease are to be found in a variety of circumstances, such for instance, as the terrible glare which exists through the summer months, the immense amount of impalpable dust which burdens the atmosphere, the great differences of temperature which manifest themselves at certain seasons between the days and nights, &c., together with the filth and wretchedness in which the natives "live and move and have their being." Inde-

pendent of these agencies, there is another which plays a most important rôle in the causation of ophthalmia. The disease is continually being propagated by *contact*—by the communication of the *materies morbi* from one person to another either directly, or indirectly through the agency of contaminated clothing, utensils, &c., or the *flies* which swarm in myriads, from one end of the year to the other, in that country. The old song of “Shoo Fly” is never sung in Egypt, for it is considered sacreligious to interfere in any way with these insects, and they are permitted to swarm where they please and to feast at discretion. How the natives accustom themselves to the presence and movements of such torments, is incomprehensible, but yet they do learn in some way to stand them, and even the children are carried about, apparently happy, with their faces darkened and alive with swarms of these pestiferous parasites. It can readily be understood, therefore, what an important factor in the propagation of ophthalmia, the countless legions of flies, become under the fostering influences of a fanaticism which accepts their visitation as a decree of Providence against which it is sinful to murmur or rebel.

In my own case the disease was developed by *contact*. Having had my sympathies appealed to by the sufferings of the soldiers and their families, from this cause, I opened a “Free Dispensary,” and attempted to do something, in a systematic manner, for their relief. Great crowds came to my clinic. My little house in the Donhadeah became the most popular resort in Cairo. I could not begin to prescribe for all who presented themselves daily, and, after two hours of incessant work I was forced to leave even the street thronged with importunate sufferers. One morning, when my labors were over, and an unusual number of desperate cases had been attended to, I suddenly felt a peculiar stinging twinge in my left eye, whilst an examination revealed a slight conjunctival injection. I tried to persuade myself that there was only a grain of sand in my eye which a little cold water would wash away; but, in less than three hours the eye looked like a pool of blood; the lids had become fearfully discolored, and swollen, and were completely closed; a continual stream of pus and serum poured down my cheek, and a pain was experienced the intensity of which cannot be described in words. Dr. Abbaté-Bey—one of the Khédive’s physicians and a most intelligent man—was immediately sent for; and, under his

judicious treatment, the disease was finally subdued, and the eye saved, without any visible alteration of structure and with only an impairment of its vision. The treatment instituted was of the strictest anti-phlogistic character; supplemented by instillations of atropia and applications of *warm* water; and I learned from the doctor that with foreigners no other plan was so successful. As I have before indicated, the pain experienced was something terrific. Under the influence of half a grain of morphia, administered subcutaneously, sleep was ordinarily induced; but it was haunted invariably by dreams of the inquisition, and the idea that my brain was being probed through with a hot iron.

I cannot refrain in this connection from saying that among all the oculists to whom I applied for relief here, I found Dr. Landolt, No. 10 Rue de la Bienfaisance, alike the most skillful and kindest. He at once discerned the nature of the lesion which the original inflammation had left as its legacy, and he treated me from the first with a degree of consideration and sympathy which was especially grateful to me in affliction so far from home and kindred. Since my residence here, I have frequently been able to avail myself of his skill in the treatment of ophthalmic affections, and always with satisfaction to myself and relief to my patients. He is emphatically the coming oculist in Paris, and has a most honorable and successful career before him.

Although my eyes have greatly improved here, they are far from being in perfect condition. The vision of the left is very feeble; and the slightest indisposition of any kind or undue exposure, especially to vicissitudes of temperature, develops a conjunctivitis which is exceedingly troublesome. At this very moment I am suffering from such an affection—as was indicated in opening statement of this letter—and am not in condition properly to redeem my promise in regard to a monthly contribution to the Journal.

Very truly and respectfully yours.

EDWARD WARREN, (BEY) M. D., C. M.

OUR NEW YORK LETTER.

Summary: Yellow Fever, Dr. Choppin's Case, Aid for Suffering Medical Men from New York County Society. The Droseras in Medicine: Dr. Roosa's Book—Dr. Stimson's Manual—Medical Colleges.

46 WEST THIRTY-SIXTH STREET,
NEW YORK, September 7th, 1878.

Several sporadic cases of yellow fever have appeared in this city and in Brooklyn. They were all promptly removed to the quarantine hospitals, and the houses and locations in which discovered were thoroughly disinfected under the supervision of the Board of Health. No fear is entertained of the spread of the pestilence among us, for, as is everywhere conceded, the disease is not more contagious than other maladies of a malarial origin, and the germs cannot be communicated if destroyed by artificial means before they find a nidus for their propagation. The fatal termination of Dr. Choppin's case, in New Orleans, which was experimentally treated by cold affusions, upon Kibbee's fever cot, was somewhat a disappointment, as the method was entirely novel in its application to this terrible disorder, and hopes were cherished of its efficacy.

Success in managing yellow fever lies in its exclusion, for it has no natural habitation in any part of the United States, and the question from this point of view, will be presented to the general government during the next winter, it being too great for either State or local Boards to deal with. Cannot the State Board of Health of North Carolina take the initiative, and influence the Legislature to petition Congress to appoint a commission of eminent men for the purpose of examining into the origin of yellow fever, and to report upon the best methods for its exclusion from our domain?

State or local Boards, if supplied with ample means, and isolated hospitals, can, with absolute certainty prevent the spread of the disease from any case which may accidentally be introduced. Professional opinion is as numerous upon this point as it is upon any proposition in medicine.

These hospitals should be built upon the pavilion or cottage plan,

so that they may be frequently destroyed without entailing great pecuniary sacrifice, and this is feasible, seeing that their construction need not have reference to winter occupancy. But what amount of pecuniary expenditure is to be regarded as a sacrifice, when made to prevent the recurrence of such dread events as are depopulating the cities of the southwest, and shrouding thousands of square miles of the most beautiful portion of our country in a death-like stillness? No other land in the world, no people but ours would recover from these repeated desolations.

The Medical Society of the County of New York held a special meeting on the 3rd inst., to provide ways and means to relieve the medical men of the South who are suffering in person and pocket from the epidemic. Large amounts of money will be collected and distributed where it will be needed. The broadest spirit of liberality is awakened, and our medical men by prompt and earnest action show that they cherish no solidarity that does not take within its fraternal arms the remotest and humblest physician of the land.

In the absence of medical news of special interest in this city, I send an item from foreign sources. In France, a number of therapeuticians and pharmacists are occupied in investigating the properties of the *Drosera*. I need not particularly describe this queer little carnivorous plant, for it is found growing abundantly in North Carolina, and probably is familiar to most of your readers. It may be mentioned that of the two species *D. rotundifolia* and *D. longifolia*, the former is the better, and is to be obtained in great quantities from its mossy beds, in the marshy environs of Wilmington.

It may be immediately after collection, while yet fresh, cleansed by shaking, not by washing, for the leaves, little hairs and glands are covered with a sweetish sticky juice in which much of the virtues of the plant reside, which water would remove. It should then be contused and thrown into its own weight of alcohol, and allowed to macerate for a month, when it may be expressed and filtered. Or, as the *Drosera* contains much water, it may be allowed to dry in the shade, and then percolated with twice its weight of alcohol. These are given only as feasible methods for obtaining the principles of the plant in an available form; the best formula, whether with alcohol or glycerine, must be developed by experience. These active principles consist certainly of an acid, analogous to that of the gastric juice, and (perhaps) a ferment.

and an acid resin. It is this acid juice which, standing on the leaves of the plant and shining like dew (hence giving the common name "sun-dew" to the plant) determines the solution and digestion (?) of insects or fragments of meat upon which the plant feeds. Of the existence of a ferment there is some doubt, for it has been shown that the juice of the *Drosera*, although effecting the solution of albuminoids, is unable to convert them into peptones, and it is alleged that there is no true digestion, but only a conversion into fertilizing material which the plant absorbs and assimilates. Indeed, all plants have the power of assimilating meats, some by their rootlets and some by their leaves, so that the designation of the *droseras*, *dioneas*, *sarracenias* and others as carnivorous is not strictly scientific, that is, if the property be denied to others. But this only by way of botanical interest; let us hasten to the consideration of the therapeutic properties.

The reports of the use of *Drosera* have so far been made only as concerns the cough of phthisis, and the paroxysms of pertussis. These have been mainly favorable. Particularly the fits of coughing and the vomiting of pertussis have been ameliorated and in some instances cut short. M. Créquy noted a prompt reduction in the number and violence of the paroxysms, as also M. Constantia Paul, who succeeded in jugulating—so to speak—the disease with *Drosera*.

The plant has no toxic properties, and the dose of such a preparation as I have described need only be limited with reference to the amount of alcohol it involves. I would, however, call attention to the probable caustic and corrosive properties of strong solutions, and caution the pharmacist against keeping his hands too long immersed therein.

Messrs. Wm. Wood & Co., have just issued the fourth edition of Dr. Roosa's work on "The Diseases of the Ear."

To speak now of the excellent qualities of this book would be only to repeat what every practitioner in the land knows.

The author has written plainly and from the fullness of his knowledge, aiming to make an honest book for the purpose of instructing us, and not (as is too common) to produce the impression that otology is a mighty science with which he only is competent to deal. The work is almost free from points to be criticized unfavorably. Perhaps it would have taken nothing from its value to have

omitted the long historical sketch which forms the introductory chapter; and it would have evinced greater care in the revision if quite a number of typographical and other errors had not remained undisturbed, just as they appeared in all the previous editions. Some men's ideas in physiology and treatment have not been introduced, but taken altogether the work is to be commended not only as the best hand-book from American sources, but as the most useful for our practitioners and students.

In the notice of Dr. Stimson's Manual of Operative Surgery, in my August letter, it was an error to state that no method was given for catheterizing the male bladder, for an excellent account of this operation is contained on pages 399-401. I hasten to make the correction because I would not have the inference to be drawn that this work, which is described to be a great boon to every busy practitioner, is deficient in so important a particular.

The Colleges are preparing for large classes for the ensuing winter, and doubtless they are coming. We cannot help regretting that the flood of M. D's. continue to rise; nor hoping the barriers which has been set against it elsewhere may be put up here, in the shape of preliminary requirements and a higher standard for graduation. New York is a magnificent field for clinical study and the corps of teachers equal to the best in the world, but these advantages can never be exercised at their full value so long as students of all degrees of advancement and intelligence are forced into the same classes and to receive the same instruction. DER.

STILBEINE, A PREPARATION FOR CLEANSING INSTRUMENTS.


This handy preparation is simply a combination of rubber and impalpable emery powder. It comes in tablets of the shape and size of the ordinary rubber eraser. It removes rust and blood-stains, etc., immediately, and without scratching or soiling the instrument. All that is necessary is to rub the instrument with the composition, when it rapidly acquires a brilliant polish — *Année Méd from N. Y. Med. Record.*

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DEROSSET, M. D., 46 West 36th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

 Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.

MINERAL WATERS.

It sounds a little odd that medical men should be reminded of the necessity of water. In a late work, the *Practitioner's Hand Book of Treatment*, by Dr. J. Milner Fothergill,—a work which deals not much with theory, but enters minutely into practical details—we find the following :

*“A large portion of our (solid) bodies is water ; and a constant flow of water through us is necessary to existence, to say nothing of health. By means of water in simple solution, a great many constituents of the body find their way out of the system. A constant bathing of the tissues with fluid is perpetually going on, and by such means the waste is removed. In many persons the amount of water, in any and every form, consumed *per diem* is much too little for the efficient washing of the tissues. The bulk of water then which is insisted upon at the various baths is itself an agent of no mean therapeutic power ; and if it be also charged with various

alkalies, the removal of waste will be facilitated. When there has been a rather too little dietary indulged in, and the patient suffers with supposed gout in any of its protean forms, such free consumption of water is very useful especially when alkaline. * * *

If it be desired to act upon the bowels, and there is a sluggish liver, so-called, or a loaded liver, with engorgement of the portal circulation ; it is well to recommend the patient to visit some spa where the water is purgative as well as alkaline. Such water is furnished by the springs of Carlsbad, &c . * * while fairly purely purgative waters are to be found at Püllna, the Hungarian HUNYADI YÁNOS, Estill, Ky., and Bedford Virginia Springs. Such waters are very useful in all cases where digestive system has been systematically and regularly overworked.

“Waters are now exported in large quantities, and vary from the potent Hunyadi Yános water to the delightful Apollinaris water, an exquisite beverage.”

WRITER'S FATIGUE.

There is a degree of muscular fatigue of the fingers used in writing, short of scrivener's palsy, which is a serious detriment to some professional men who do their own writing. Our attention has recently been called to it by the editor of one of our leading papers, asking for a remedy. We will give the advice which we gave him in as few words as possible, adding at the same time that it is not so applicable for complete writer's paralysis, although it will answer in the early stages of it.

Most writers hold their pens grasped rather firmly with the thumb and index and second finger, the hand sliding over the paper upon the little finger as a pivot. This process involves the muscles of the fingers, as the pen is *propelled* rather than *glided* over the paper. The fatigue is muscular, at first, and is brought about by the continued tension of the muscles employed in grasping and directing the pen.

The remedy is simple, and only involves a change in chirorgra-

phy, sometimes to the extent though of spoiling a heretofore graceful and pretty hand. The pen should be taken between the forefinger and the one next to it, after the fashion of phonographers, and only held loosely in position by the natural contact of these two fingers, while the forefinger, middle finger and thumb rest in loose contact with the pen-holder. The motion then is gliding from left to right, the up and down strokes being performed mainly by the motion of the wrist. With a lead pencil there is no easier way to write, and a little practice enables one to acquire a legible hand ; and there need be no obstacle to writing with a pen, as suitable instruments in gold and steel, with their nibs bent to the left are easily procured from a stationers.

This new position of the pen enables the writer to rest his forefinger and thumb, and after the lapse of months he may return to the more familiar way for special occasions.

REVIEWS AND BOOK NOTICES.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND. Eightieth Annual Session. Held at Baltimore, Md. April. 1878. Pp. 208.

The opening address of the Society was delivered by the President, Professor A. B. Arnold, M. D., on "Homœopathy." The writer had assigned himself the "humble task of rehearsing the tenets of Homœopathy," although it had "put on so motley a garb of late, that it resembles nothing in heaven above or in earth beneath." Then follows an analysis of the leading tenets of Hahnemann's system, the substance of the theory of disease being summed up in the paragraph : "For diseases are not mechanical or chemical changes of the material body, nor are they dependent upon the morbid matter, but merely spiritual dynamic disturbances of life." After reading this paper, we can only advise our homœopathic friends as Gen. Lee did one of his lieutenants after a sharp and disastrous repulse : "Your line is too long and too thin ; you had better order your men to stack arms and rest."

The real danger from homœopathy is not its Hahnemannism, for there is very little left of that, but it is the danger of such large bodies of them deserting to our ranks, as to disturb our equilibrium. We hear the remark in increasing frequency : “ Dr. —, practices both systems ; ”—that is he relies upon sugar of milk pellets until he or his patients get frightened.

The address commemorative of Professor Nathan R. Smith, is by Professor S. C. Chew, of the University of Maryland. The memoir has a heliotype portrait of Dr. Smith, which, notwithstanding its unnatural stiffness, is said to be an excellent likeness. Dr. Smith's name is greatly revered in North Carolina for many acts of professional kindness done to scores of our citizens, both during the war and since. His professional reputation was very great, but more particularly is his name associated with his anterior splint. It was first introduced into this State in 1857, by Dr. James F. McRec, Jr., and made after the bungling model, the diagram of which appeared in the *Maryland and Virginia (?) Medical Journal*. Since then it has served scores of poor unfortunates—both doctors and patients—who honor the name of Nathan R. Smith, for valuable limbs restored to them in their full power.

The Annual Oration was delivered by Professor Ira Remsen, who in the outset disclaims being a medical man, but nevertheless carries one on with interest in a well written review of the progress of medical chemistry.

In the REPORT OF THE SECTION ON SURGERY, Dr. Alan P. Smith gives a report of “ *Fifty-two successful cases of lithotomy.* ” It is remarkable success not to have lost a single case ! He says : “ he has always observed certain rules, which have possibly been of some assistance in determining the result. He never operates when the barometer is low, preferring to postpone his work from day to day until the weather is bright and clear. This rule, he believes, applies equally to all grave surgical operations which will admit of delay.” He also remarks : “ that he attributes most, if not all of his success, to the use of the instrument devised by his father, the late Professor N. R. Smith.” A cut is given of this instrument, now too well known to need a description. “ The instrument seems to me,” says Dr. Smith, “ to be as nearly perfect as possible, and the only objection I have ever heard urged against it fell from the

lips of a distinguished professor of surgery, who rather complainingly said that with it *any one* can operate."

The very singular case of double penis with double bladder, and from one of which Dr. S., extracted a stone, is mentioned in the May number of the JOURNAL, Vol. 1, p. 310.

Ophthalmological Notes, by Professor A. Friedenwald, M. D., are upon *Anæsthetics in Ophthalmic Surgery*, and *Spasms of Accommodation*. Dr. John Monmonier reports some surgical cases: *Partial Excision of the Os calcis and Astragalus*; *Two Cases of Extroversion of the Bladder*; *Extirpation of the Superior Maxillary Nerve*. Professor Thomas R. Browne, contributes a paper on *Urethral Stricture*. After a thorough review of the whole ground he concludes that internal urethrotomy is the safest and most intelligent way of relieving (stricture) fraught chiefly with those dangers which have been imposed by partisanship on the one hand, and prejudice or unwillingness to disestablish an old practice on the other." * * * * "It seems to me, moreover, that the treatment by splitting, or by divulsion as accomplished by Holt's instrument, involving as it does, lacerations of the urethra as well as the stricture, engenders a condition as bad as, if not worse than, the disease which it seeks to remedy."

REPORTS OF SECTION ON PRACTICE OF MEDICINE. Professor John S. Lynch makes a report upon the *Sulphides in Diabetes*, and on *Apyretics and Antipyretics in Fever*.

We make one extract from Dr. Lynch's paper on the physiology of calorification:

"In the production of high temperatures in fevers then, there must be some other factor besides augmented absorption of oxygen by the blood through increased activity of the two functions concerned in that process. What is that factor? I think I have shown that the phenomenon cannot be explained before Rosenthal's theory of radiation and evaporation; upon Ackerman's assumption of antagonism between blood pressure and temperature; upon Bale's theory of bioplastic growth, nor wholly upon the rate of absorption of oxygen by the blood. We are reduced then, as a last alternative, to admit that, while animal heat is a chemical product and under the government of a purely chemical law, there is yet a still higher law, a physiological and vital one, which presides over

and regulates the chemical process. We must admit this or say we know nothing about it."

He then treats of *Indirect Apyretics* and *Direct Antipyretics*. He considers alcohol entitled to a first place in the list of secondary or indirect apyretics, and it is also equally active as an antipyretic. * * * "Conjoined with the cold bath, it furnishes us with the most rapid means of reducing fever heat consistent with safety known to the profession. * * * Salicine, beebeeria, cornine, and nearly all the bitter vegetable alkaloids have the same action, but in a minor degree, as the alkaloids of cinchona." We regret that Dr. Lynch did not extend his observations over a broader field of therapeutic agents, but hope we may have the pleasure of seeing more on the same subject from his pen.

SECTION ON OBSTETRICS AND GYNÆCOLOGY. *Chloroform in Obstetrics* is the title of the paper in this section, by Dr. P. C. Williams, Chairman. The opinion of the reporter in reply to the question, is it safe to use chloroform in obstetrical patients, is clearly answered in the affirmative. He is firmly convinced that anæsthetics have conferred the greatest of all blessings upon women in the perils of child-birth. Not only do they relieve the suffering and remove the apprehension, but they also shorten the labor, and greatly facilitate convalescence. "*In obstetrics chloroform is perfectly safe.*" A most decided preference is given for chloroform as the anæsthetic. We consider this a very just estimate, the value of the agent and the application of it, and a more extensive experience with it, in the hands of physicians who are habitually careful, will confirm all that SIMPSON ever said in its favor.

SECTION OF MATERIA MEDICA AND CHEMISTRY. Dr. J. E. Atkinson makes a report of some of the new remedies,—*Salicylic acid*, *Tayuya*, *Curara*, and *Chrysophanic acid*; and devotes the rest of his report to the Metric System.

SECTION OF PHYSIOLOGY AND PSYCHOLOGY. Professor Donaldson, Chairman of this section, makes a report on *Spontaneous Generation*. We cannot follow Dr. Donaldson in his argument for lack of space, and only give his conclusion of the subject. He says: "After a careful perusal of the recent observations as published, and giving due weight to all objections, *we are forced to the conclusion that life never appears independently of antecedent life.*"

Dr. J. D. Thompson from the same section reports a paper on

General Paralysis of the Insane. Dr. Thompson concludes—"In regard to the exact pathology of this very interesting disease, we are still without much certain knowledge. From the date of its recognition, to the present time, there has been a constant discussion and much conflicting testimony as to the nature and special localization of discernible lesions in general paralysis, and these questions remain in an unsettled condition. In 1826, Calmeil wrote, "This disease depends upon some one modification of the brain, the nature of which we have not yet learned to appreciate." And, at the present day, with all the advancement which scientific investigation has made, we are yet waiting for more light; the exact conditions, pathognomonic of this particular disease, are still undetermined.

Professor L. McLane Tiffany read a paper on "Removal of Naso-Pharyngeal Polypus by Temporary Depression of Both Jaws." This case has before been mentioned in the NORTH CAROLINA MEDICAL JOURNAL (August, p. 140). We need make no apology for giving at length this remarkable case:

"Owing to the large size of the tumor, temporary depression of both upper maxillary bones was determined on, and for the same reason a provisional tracheotomy was judged to be proper.

"Feb. 19th, tracheotomy performed. An unexpected complication nearly cost the patient his life, arising from the size of the tumor. The patient inhaled ether well, but when the stage of muscular relaxation was reached, at once the tumor, which rested on the soft palate, sank down and closed the opening of the trachea like a ball-valve. Drawing the tongue forward was of course useless, so fingers were thrust into the mouth to raise the tumor, and respiration was reëstablished. It was found, however, that the pressure of the fingers necessary to raise the tumor caused profuse bleeding from its surface, which rapidly passed into the now open glottis, and asphyxia was again imminent, indeed after a gasp or two respiration ceased. The patient was at once held up by the legs with his head to the floor, and in that position I rapidly opened his trachea, inserted the handle of the knife and turned it across, thus widely separating the lips of the wound. An ounce or so of blood gushed from within the trachea, and respiration commencing, went on regularly. A tube was inserted and the patient put to bed.

On the morning of the 21st the tube was not in position, but was replaced in the trachæa.

“February 25th, operation for removal of tumor. It being my intention to sever the pedicle with Paquelin’s thermo-cautery, chloroform was used as the anæsthetic. Chloroform was inhaled through the tracheotomy tube. To prevent the passage of blood into the air passages, instead of a complicated apparatus (*i. e.* Trendelenburg’s), a sponge of proper size, having a piece of ligature silk tied to it to facilitate removal, was passed into the top of the larynx. This sponge was not pressed “home” until the patient was profoundly anæsthetized. An incision was carried down on each side of the nose, at the junction of the nose and cheek, then around the ala and through the middle line of the upper lip into the mouth. The cheeks were then freely dissected from the upper jaws as high as the nasal bones, infra-orbital foramina and malar bones. In this dissection the periosteum of the upper jaws was not disturbed. The nose was separated from the upper jaws and turned up toward the forehead. A fine saw was then made to cut each jaw from the malar process into the middle meatus of the nose, passing just beneath the infra-orbital foramen, upward and inward. The posterior wall of the upper jaw were in contact with the pterygoid process was not divided, lest the superior palatine artery should be injured. The septum of the nose and the vomer were cut with strong scissors. Both upper jaws were strongly depressed and sank down, hinging upon the pterygoid processes. The tumor was well exposed, and its attachment found as expected. The pedicle of the growth was divided by Paquelin’s cautery, and the root of the pterygoid process together with the basilar process of the sphenoid thoroughly scraped with the curved knife, hot, of the same instrument. The curve of this blade was sufficient to enable me to reach quite to the back of the pterygoid root. One or two bleeding points in the mucous membrane of the septum were touched with the cautery. Chloride of zinc in crystals was thoroughly applied to the bone from which the tumor grew. The pedicle at its site of attachment was about one half inch in diameter. There was no depression or perforation of bone at this point.

“Difficulty was experienced in extracting the polyp in consequence of its size, necessitating the use of the lithotomy forceps.

Except upon the face, no vessels spouted, but there was a good deal of oozing. The wound was held open and the cut surfaces allowed to glaze. The jaws were replaced and held in position by a loop of wire, passed through the cheeks near the outer angles of the orbits, and joined above the forehead by a rubber band. A celluloid plate was adapted to the teeth of the upper jaws and grooved, so as to hold the wire securely. The cheek flaps were then united to each other and to the nose by suture. Finally, the sponge was withdrawn from the larynx. The shock was great, and whiskey was given hypodermically to the extent of nearly an ounce.

“Just as the wound was being closed, respiration became very slow and feeble, the pulse disappearing. The poles of a battery were applied over the sterno-mastoid muscle, and over the epigastrium, producing two or three strong, deep inspirations, after which all went well. The patient was put to bed and surrounded with hot bottles.

“The tumor was between three and four inches long, pear-shaped six inches in circumference half an inch from the lower end. Weight not taken; consistence moderately firm; color pink, with here and there areas of dark red.

“Microscopical examination of the removed growth shows different tissues in different parts of the neoplasm. Large vessels, with sometimes sanguineous extravasations, well marked spindle cells in bands, newly formed mucous glands, lined with their characteristic epithelium, here the lumen filled with epithelium, there somewhat dilated with retained mucus so as to present the appearance of wide tubes, but at no point are epithelial-like elements found outside of the glands; finally, everywhere is apparent rapid proliferation of the connective tissue elements. The growth is classed as adeno-sarcoma.” * * * *

“Extirpation of one upper jaw was, I believe, first performed in 1820, the late Dr. Jameson, of this city, being the operator; his patient recovered. Osteo-plastic resection of one upper jaw was devised and first practiced by Langenbeck in 1859, and has since been successfully repeated by himself and others. Temporary depression, osteo-plastic resection, of both upper jaws has been attempted, so far as I am aware, but once by Cheever, of Boston. His patient succumbed one hundred and twenty hours after the operation, never having rallied beyond the stage of ‘prostration with

excitement.' In the case now reported the incisions were made as in Cheever's, but operative measures upon the upper jaw were preceded by a tracheotomy. To this latter provision I am largely inclined to attribute the successful issue, as thereby free respiration was assured, and danger of any foreign substance entering the air passages removed. The prostration following the operation was great, yet reaction came on as usual after severe measures, and subsequently all conditions were very favorable, the temperature on two occasions only rising to 103.5° , and the pulse but once reaching 110. With the exception of the third day, February 28th, when puffiness of one eyelid was noticed, erysipelas feared and iron administered, convalescence was uninterrupted. For twenty-four hours after the operation the mucous membranes of the upper jaws was less florid than that of the lower; by the second day the eye could detect no difference in color. The absence of pain was a noticeable feature, no opium or other hypnotic was administered at any time.

"The method employed to prevent the passage of blood into the trachea is worthy of notice, as infinitely more simple than any other, while nothing could be more efficacious. For one hour the sponge remained in position, giving rise to no cough, yet entirely plugging the top of the larynx. The sponge was conical, two inches long, tapering from one half inch to two inches in diameter, and was passed into the larynx between the epiglottis and arytenoid cartilages. After removal the lower intra-laryngeal end was scarcely tinged with blood, showing how perfect the protection afforded to the air passages had been. The tracheotomy wound was thoroughly healed when patient left hospital."

Dr. Tiffany's surgical work and his reports are always clear, forcible and brilliant, as the above quotations, and his previous contributions to the JOURNAL will show.

But we must leave this volume of Transactions with regret for lack of space, and recommend its perusal to the members of medical societies in other States.

PHYSICS OF THE INFECTIOUS DISEASES. Comprehending a Discussion of Certain Physical Phenomena in Connection with the Acute Infectious Diseases. By C. A. LOGAN, A. M., M. D. Jansen, McClury & Company. Chicago. 1878. Price \$1 50.

This book will attract one by its beautiful mechanical appearance rather than by its title.

We learn that the author was "a member of the Kansas State Geological Survey, in charge of the Departments of Botany and Sanitary Relations;" and that subsequently he was Minister to the Republic of Chile, and, therefore, he enjoyed extensive opportunities to write clearly of the geography of the diseases of these countries.

Part I. Introduces the reader to the author's theory on the atmosphere as a medium of disease transmission; a classification of the diseases to be considered; and the geography of disease.

The physical aspects of the Pacific Coast of South America, including its general characteristics; Earthquakes from a Medical Stand-Point; The Andes and their Influence upon Climate; The Trade Winds; Where the Rains Come From; The Earthquake under Medical Scrutiny; Concerning Ozone and its Tests, Its effects upon Man and Animals, Its effects upon Insects and Aerial organisms; Conclusion as to Ozone; Antozone, and many other heads which space does not permit us to notice.

Part III treats of the Medical Aspects of the Pacific Coast of South America.

Part IV of the Physics of Causation, Discussing such questions as "The Ideal Functions of the Nervous System; The Vital Force; Vital Gravitation; The Three Laws Concerning the Beginning, Duration and Termination of Life; Distribution of Energy; the Localization of Energy."

Part V treats of the "Therapeutics of the Infectious Diseases."

Part VI. "The Question of Energy as related to General Disorders."

A review of the leading topics discussed, will raise the reader's expectations, which a careful perusal will hardly gratify. The book is a novelty in public medicine, and is an indication of a wide spread interest in the department of medicine, without making clear the points attempted. We are constrained to believe that if the author had allowed his little book to remain in MS., and

waited for a riper state of his own mind in regard to some of the theories attempted, and then put his whole energy into the "larger work" he promises, his reputation as an author would not have suffered. We are sorry to say that the beautiful paper and printing have not compensated for the lack of clear and comprehensive ideas.

There is, however, one practical point we wish to notice under the heads of the Therapeutics of Infectious Diseases.

"*The Terpines.* This class of agents, which the author believes capable of great usefulness. By exposure to the air, they absorb oxygen freely, which during subsequent chemical changes, whereby resin is produced, is converted into ozone; and this latter is readily given up to the system upon internal administration. They are emphatically "ozone-carriers."

"The terpines are volatile oils, and are obtained from plants of the coniferous and aurantiaceous orders. In the class are embraced the ordinary oil of turpentine, representing the first order," &c. &c.

Many North Carolina sea-coast places, and especially the city of Wilmington, bears witness to the truthfulness of the observations of the influence of the products of the coniferous trees of our coast-belt. Personal observation both by the non-medical as well as the medical world confirms the opinion that to the turpentine distilleries on the river side, and to the succulent rapid growing pines on all other sides, though now at some distance have changed the character of our city in a half century from a very sickly place, not habitable during four months of the year by the stranger, to that of a town so free from danger that in a population of about 15000 only two deaths among the whites in July (one of the sickly months) and neither of these from malarial causes. It is a well-grounded belief that if the distilleries had been in operation during 1862 when the yellow fever ravaged the city, that it would have been less virulent.

But, in returning to Dr. Logan's book, we can only ask our readers to read it and form their own estimate.

THE FERNS OF NORTH AMERICA. By DANIEL C. EATON. Parts I to VII. S. C. Cassino. Salem, Mass.

FLOWERS AND FERNS OF THE UNITED STATES. By THOMAS MEEHAN. Parts I to VIII. Boston. L. Prang & Co.

We can do our readers who have a love for floriculture or botany

as an amateur study, no greater favor than to ask their attention to these works. Professor Eaton is an acknowledged master of his subject, and the artist who has charge of the illustrations has faithfully performed his part. Of Professor Meehan's work too much praise cannot be given it. Hundreds of dollars are spent with book peddlers in the course of the year, for books absolutely worthless, while such periodicals as these are neglected, and the authors allowed to suffer loss. If physicians would pay more attention to introducing such works into their families, they would be well repaid in the amount of cultivation gained without the effort of the dry study of technical botany.

We would like to single out one or two of the thirty-two beautiful chromo-lithographic illustrations now completed in Mr. Meehan's work, but they are all so good that it is difficult to make a selection. We venture to say though, that the man or woman's taste would be dull indeed, and his pocket-book extremely flat, if after seeing any one of the illustrations he did not subscribe at once.

We have spoken before of Professor Eaton's work, and we are glad to see that the subsequent number have sustained the earlier impressions, which was one of superior excellence.

Both of these serials, are written within the comprehension of the reader who may not be a botanist, and have brought together pleasant and interesting items which could not be found in any one library within the reach of the best prepared botanists.

The *Flowers and Ferns of the United States*, is sold at the very reasonable price of 50 cents a number.

BIBLIOTHECA MEDICA. Robert Clarke & Co. Cincinnati. Pages 244.

We make our acknowledgements to Messrs. Robert Clarke & Co., for their valuable medical catalogue. It is arranged with method—the subjects alphabetically, the catch-titles in broad-faced type, the authors under these heads alphabetically. To the librarian and collector this work will save much trouble, and is sure to be consulted with profit. It is an essential part of a physician's education, that he should make himself familiar with medical book-catalogues, and a habitual attention to it will more than repay him for

the dry and dusty route he must travel. There is also a copious index of the works enumerated, and every inducement is offered by these publishers to entice the members of our profession to a better acquaintance with their own literature.

ON THE THERAPEUTIC FORCES. An effort to consider the action of medicines in the light of the modern doctrine of the conservation of force. By THOMAS J. MAYS, M. D. Lindsay & Blakiston. Philadelphia. 1878.

In the domain of experimental therapeutics the medical mind is increasingly active in this country, as is shown by the issue of books on this and kindred subjects in the last few years. This little book "was originally intended for a Journal article, but on account of its length was printed in this form," says the author. We do not think this work will place its author at the head of a new school of therapeutics, and doubt the propriety of multiplying books after this fashion.

THE PATHOGENY AND TREATMENT OF KERATOCONUS.

(*M. Panas, in Bulletin Général de Thérap., July 15, 1878*).

* * * * With respect to the Pathogeny of Keratoconus, it is neither a spherical, nor ellipsoidal dilatation; but if a nice micrometric analysis be made, it will be readily seen that a conical cornea represents a hyperboloid, the central part having a radius of curvature much shorter than the periphery. In one patient, Lebert found that at the summit of the cornea the radius was scarcely 2 mm., while at the circumference it was 10 mm. * * *

This would indicate that the seat of the lesion is in the centre, which was also the opinion of von Graefe founded upon the thinning of this portion. Starting with this idea von Graefe proposed to remove the central segment, leaving only the healthy parts. * * *

But what is the nature of the lesion which renders the cornea thinner? Let us recall the experiments of Hiss, who succeeded in producing keratoconus in rabbits, and also those of Lebert in reference to filtration through the cornea.

If a curved needle be introduced into the anterior chamber, and the posterior surface of the cornea be sacrificed so as to break up the endothelium (Descemet's membrane) after a while the cornea will bulge forward into a true conus. I have repeated these experiments upon rabbits with the same results.

Up to within a brief period it was thought that the surface of the eye-ball was bathed by the tears and aqueous humor, and that this latter transuded through the cornea from within, but several years ago Lebert demonstrated that this transudation was abnormal, only taking place when the endothelium was destroyed, and that no such effect followed the destruction of the epithelium on the anterior surface. Further than this, he showed that when a single point of the endothelium was destroyed filtration of the aqueous ensued, but only at that point, as if each endothelial cell protected a small, corresponding region of the cornea. From one of the eyes of the rabbit upon which I experimented I scraped off the external face of the cornea down to Bowman's lamina, producing a traumatic keratitis, but no projection; from which we may justly infer that keratoconus is due to destruction of the endothelium of the central part, although I have not had an opportunity of proving this by actual dissection of a conical cornea. Nevertheless, admitting that the hypothesis is true, it is quite conceivable that the ablation of the conoid would effect a cure, by substituting for it a flattened cicatrix, and by removing the tendency to increase of the abnormal process.

The measures recommended by von Graefe were instillations of atropia, iridectomy, pressure and repeated paracentesis, but all these, directed as they were, against increased tension, were in vain and useless, seeing that there is no increased tension in these cases. He likewise suggested the removal of the summit of the cone, without opening the anterior chamber, but that is very difficult. He recommended also that the central point of the cornea should be touched with a pencil of mitigated nitrate of silver, (two-thirds being nitrate of potash), the cauterization to be continued until a fistula resulted. When the tract for the escape of the aqueous was established, it was to be kept open as long as possible; in this way cicatrization was obtained, but whenever an attack of inflammation came on the treatment had to be suspended, which greatly prolonged its duration.

Upon a patient of mine I performed Bader's operation removing from the corneal centre a transverse elliptical segment, 3 mm. long and 2 mm. broad. The aqueous escaped ; a pressure bandage was applied ; cicatrization required more than two weeks, and the anterior chamber closed without accident further than the formation, in spite of the diligent use of atropia, of a slight synechia at the inferior portion of the wound. There was a linear cicatrix, and the immediate result was favorable, the cone having disappeared at the end of six weeks, but the anterior synechia remained, and the patient suffered from ciliary pain and glaucomatous complications with increase in the intra-ocular tension.

To what was this latter accident due ? Possibly to two causes : the cessation of filtration and the synechia. I employed eserine, which, in pathological conditions, has the effect of diminishing the tension of the globe, contrary to its action in the physiological state. This proved benificent, but not removing the symptoms entirely I made an iridectomy for curative and visual purposes.

The patient's cornea is now almost spherical, and all complications were removed by the iridectomy. The photophobia which always accompanies keratoconus was overcome by the hypodermic use of muriate of morphia, and with this eye the patient is able to read No. 3, of Giraud-Teulon's test types. I believe that it may be said that the progress of the malady has been arrested ; with respect to his vision the man has gained but little, the cornea being irregular, and marked by a central leucoma.

M. Giraud-Teulon. Was a histological examination made of the piece removed from the cornea ?

M. Panas. An attempt was made, but sufficiently small section could not be obtained.

M. Giraud-Teulon. I have seen two cases of keratoconus in which Bader's operation sensibly improved the vision.

Professor Virchow has declined to be reëlected to the Reichstag, and will hereafter devote himself entirely to pathology. An admirable example to be followed in North Carolina with advantage.

NOTE ON GELSEMIUM POISONING.

By CHARLES DUFFY, JR., Newberne, N. C.

A colored *nymph du pave*, aged 30, large and fleshy, weight about 160 lbs., sent to me for "something to relieve a severe headache." Without seeing the woman, I sent about 3 i of Schiffelin's fl. ex. gelsemium, with directions to take ten drops every two hours until pain was relieved, or until it caused disturbance of vision. In half hour I received a message to visit the woman, whom I found tossing herself about the bed in the wildest manner, crying out she was "blind and turning over and over, and round and round," sobbing as if in great mental distress. On being questioned, said she had no pain, and did not know what ailed her. There was no loss of power in any of the voluntary muscles, but there seemed to be inability for continued effort of any kind. On being directed to sit up, would readily do so, but would almost immediately lie down again, or rather *fall* down again. She could at any time raise the eyelids, and turn the eye in any direction she chose, but the lids when left to themselves would drop. The pulse and temperature remained normal throughout the continuance of effect of drug. There was no change in the normal appearance of the pupil. She had double vision and distances seemed much shortened, so that objects across the room seemed very near to her. In about an hour after she had taken the dose, she became quiet and rather dull, but there was no marked hypnotic influence. On enquiry it was found she had taken a teaspoonful of the medicine; nothing was given to counteract the effects of the medicine, and all unpleasant symptoms passed off in four or five hours. In many instances in which this preparation had been used, I found that ten to twenty drops usually produced its characteristic physiological effects.

Thymol.—This reputed antiseptic agent seems to have come early into disrepute. In a Berlin hospital it was found that its odor caused the patients and nurses dull and even severe headaches; and it was so attractive to the flies as to make netting necessary for the protection of the patients; the dressings were literally covered with them.—*N. Y. Med. Journal*.

CURRENT LITERATURE.

MEDICO-LEGAL EVIDENCE RELATING TO DETECTION OF HUMAN BLOOD, PRESENTING THE ALTERATIONS CHARACTERISTIC OF MALARIAL FEVER.

We took occasion to present our readers with an abstract of Professor Stanford E. Chaillé's on Medical Jurisprudence in our Medico-Legal Investigation, N. C. MED. JOUR., Vol. 1, p. 183, and we now take pleasure in presenting to our readers by a member of the same Faculty, Professor Joseph Jones, M. D., a most useful lesson in this difficult and neglected branch of medicine.

Dr. Jones was called upon to give his expert opinion in a case of murder, the circumstances being as follows :

Narcisse Arrieux was found on the morning of December 28th, 1876, dead in his store situated on the banks of the Mississippi, near the south-western border of the town of Donaldsonville, Louisiana. The head, face, beard and clothing of the old man Narcisse Arrieux, were covered with clotted blood. It was evident from an extensive compound comminuted fracture of the cranium extending on the right side from the occiput across the right parietal bone and frontal bone to the internal canthus of the left eye, and from several other contused wounds on the head, that death had been caused by blows inflicted by heavy blunt instruments.

A post-mortem examination was made by Dr. John E. Duffie, an intelligent and accomplished physician, of Donaldsonville, at the coroner's inquest. There were contused wounds on the left side a half inch in length near the inner canthus of the left eye. Great ecchymosis of both eyes. Contused wound on back of head penetrating to the bone. Contused wound two inches long on occiput, fracturing and depressing bone. On the right side there was contused wound on forehead, penetrating to the bone, three inches across root of the nose. . Another three inches in length, ending in a line with top of the right ear, fracturing and depressing right temporal bone. When the scalp was removed extensive fractures were discovered.

It appears from the condition of the premises at the time of the inquest, that notwithstanding the extensive wounds and fractures

of the cranium, the deceased after the infliction of the injuries and after the flight of the assassins and robbers, had partially regained his senses and the use of his limbs; had closed his door, examined his money drawers, had attempted to light a fire in his stove, had placed a newspaper on the floor, unbuttoned and pulled down his pantaloons, and evacuated his bowels, had staggered around the walls steadying himself with his bloody hands and after seating himself in a chair had died and fallen upon the floor, overturning the chair and lying upon the floor with his legs bent. He appears to have died in the sitting posture and after death and even after the establishment of the rigor-mortis the body had fallen upon the floor.

It appears that four powerful negroes entered the store of Narcisse Arrieux, and attacked him from behind as he was drawing liquor for them. It is probable he remained unconscious during the robbery of the store. The large hemorrhage probably relieved the congestion of the brain temporarily, and upon return to consciousness he was enabled to stagger to his door, close it, and examine the desks in which he kept his money. Spots of blood were found upon the clothing of one of the suspected parties, and it was forwarded to Professor Jones for examination.

Result of chemical and microscopical examination of stains on the coat and shirt of Wilson Childers, one of the accused.

Upon careful chemical and microscopical analysis and examination, I determined that the stains on the coat and shirt of the accused, were not paint, but were *human blood*.

I also determined the fact that *the blood was that of a human being who had suffered and was probably suffering at the moment when the blood was abstracted, with malarial or paroxysmal fever.*

My written statement of the general result of the chemical and microscopical analysis and examination, sworn to before a justice of the peace, together with the pieces of cloth carefully sealed, were forwarded through Mr. T. A. Landry, to the Honorable Court, 4th Judicial District, State of Louisiana.

I do not introduce into this statement any allusions to the pathological state of the blood, but simply announced these results, namely :

1st. That the stains were not due to red paint nor to any form of paint.

2d. That the stains were blood.

3d. That the blood *presented* all the *characteristics of human blood*.

I informed Mr. Landry, however, of the conclusion to which I had arrived, that the blood was that of a human being who had suffered and was suffering at the moment of its abstraction, with malarial or paludal fever.

OFFICIAL REPORT TO THE COURT.

MEDICAL DEPARTMENT UNIVERSITY OF LA.,
NEW ORLEANS, January, 2d, 1877.

On the 2d of January, 1877, a sealed package was placed in my hands by L. A. Landry, acting under the order of M. O. Markes, Parish Judge, of the Parish of Ascension. Upon breaking the seal, two smaller packages were found; namely: one marked "from left sleeve of coat," containing two pieces of cloth; the other marked "from left breast," containing three pieces of cloth. The said pieces of cloth contained spots of a red and brownish red color. Careful microscopical and chemical examinations showed that the textures of the cloth, in the discolored portions have been saturated with blood. The colored and colorless corpuscles were distinctly seen under a magnifying power of 420 diameters.

The colored and colorless corpuscles, resembled in size and structure those of man. Hæmatin and albumen were also present in the matters extracted from the discolored spots.

JOSEPH JONES, M. D.,
Professor of Chemistry Med. Depart. University of La.

EXAMINATION BY SOLICITOR.

S. Can you identify this package, with its seal, direction and contents?

J. I can: the direction is in my hand-writing; the seal is mine; the particles of cloth resemble in all respects those which were delivered to me by Mr. Landry, and which I examined in my laboratory, on or about the 2d of January, 1877.

S. Did the pieces of cloth when delivered to you by Mr. Landry, contain any spots or present anything peculiar?

J. They did. Each piece of cloth contained spots of a red and reddish brown color.

S. Were these spots caused by red paint?

J. They were not caused by paint of any color or description.

S. How would you detect spots of paint on any texture as cloth or clothing?

J. Paint consists of oil mixed with various metallic, earthy or vegetable or animal substances, according to the nature of the paint and the purposes to which it is applied. The oil may be extracted

from paint, by certain agents, as sulphuric ether and sulphuret of carbon. The oil may be recognized by its physical and chemical properties and also by the presence of globular masses of various sizes under the microscope. The coloring matters of paint under the microscope, as a general rule, present a granular appearance, and in no kind of paint do they resemble the colored blood corpuscles of man and animals. In the case of red paint, some form of the oxide of iron, or of the oxide of lead, or the sulphuret of mercury (vermillion) may be used. After the extraction of the oil from the paint by sulphuric ether these oxides specified may be rendered soluble by the action of the mineral acids and especially by hydrochloric and nitric acids.

The solutions thus obtained may be subjected to several tests. The salts of iron give blue and bluish green precipitates with ferri-cyanide and ferrocyanide of potassium, and black with solution of tannic acid, and the per-salts of iron give a brownish red precipitate with aqua ammonia, and a deep red color with sulpho-cyanide of potassium.

If the color of the paint be due either to the oxide or the sulphuret of mercury, after the abstraction of the oil in the manner specified, the metallic mercury may be reduced by heat, or a nitrate, sulphate or chloride formed by the action of the respective acids and the soluble salt thus formed may be subjected to various reagents, as iodide of potassium, (green precipitate with proto-salt of mercury, and red precipitate with per-salt of this metal); lime water and solution of potassa, black precipitate with proto-salt and yellowish red with per-salt; a plate of polished copper plunged in solution of soluble salt of mercury, is quickly coated with metallic mercury, which may be removed by sublimation dissolved in the mineral acids and subjected to the test just specified. If the color be due to the red oxide of lead, the metal may be reduced from the paint by means of the blow-pipe; the oxide may also be separated from the oil and subjected to the action of nitric acid, and the solution subjected to the action of various chemical reagents, as iodide of potassium (yellow iodide of lead), chromate of potassa (yellow chromate lead), sulphuretted hydrogen (black sulphuret of lead), sulphuric acid, and soluble sulphate of lead (white sulphate of lead).

S. What did you determine these spots to be by chemical and microscopical examination, and state fully to this Honorable Court the ground upon which your statement was based, and the processes by which you arrived at your conclusions?

J. Chemical and microscopical examination, showed the spots to be those of blood. The presence of blood was determined by the following processes and reagents: When the stains were examined in a strong light, with a low power of the microscope, the fibres were not merely colored, but presented a shining glossy appearance, and the individual fibres were observed to be invested with portions of dried coagulum or clot. Certain chemical pro-

cesses as the following established presumptively, that the matter which imparted the color to the spots on the clothing of the accused, was blood.

It readily combined with cold distilled water, forming a bright red solution; this color was not changed to a crimson or a green tint by a few drops of a weak solution of ammonia, but when this agent in concentrated form and large amount was added, the red liquid acquired a brownish tint. The red liquid obtained from the particles of blood in the textures of the cloth, by means of cold water, coagulated when it was boiled, the color was destroyed and a muddy brown flocculent precipitate was formed. When the coagulum was collected on a filter and dried it formed a black resinous substance quite insoluble in water, but readily dissolved by boiling caustic potash, forming a solution which was of a greenish color by reflected, and reddish by transmitted light. When the solution of the clots in cold water, was subjected to the action of strong nitric acid, the red coloring matter of the blood and its albumen, were coagulated, and a dirty brown precipitate was thrown down.

When examined under the microscope with various powers ranging from 400 to 1800 diameters, the red matter causing red stains was found to consist of numerous circular disc-like or flattened globules, having an average diameter of 1-3200th of an inch. The white or colorless corpuscles of the blood were also clearly distinguished.

S. Did you observe anything which would indicate the state of the health of the individual from whom the blood had issued upon the clothes of the accused? and if so state your observations to this honorable court.

J. I observed changes in the blood obtained from the pieces of cloth which lead me to infer that the person from whom it was abstracted had suffered and was most probably at that time suffering with paroxysmal, paludal or malarial fever. This opinion was based chiefly upon the following abnormal substances observed in connection with the colored and colorless or white blood corpuscles; black pigment or melanæmic corpuscles, varying from 1-10,000 to 1-1000ths of an inch in diameter; conglomerations of these melanæmic particles, in masses of various sizes; colorless corpuscles or leucothytes which contained small granular masses of black pigment. Many of the particles of the melanæmic pigment were spherical, others irregular and angular, some entirely free, others incased in a hyaline mass; others incorporated with cellular elements which are more or less related to the white corpuscles of the blood.

These black pigment particles indicated the destruction or alteration of the blood corpuscles and the escape of the hæmatin of the red globules which is characteristic of malarial fever.

S. How long have you been engaged in the microscopical and chemical investigation of the blood of man in disease, and upon what facts do you base the preceding statement?

J. My investigation upon the chemical and microscopical changes of the blood in fevers, and especially in malarial and yellow fevers were commenced in 1856, and have been pursued continuously up to the present moment: and during the past ten years I have treated in the wards of the Charity Hospital of New Orleans, over four thousand cases of various diseases, more than one half of which were due to the action of the malaria of the swamps and marshes of the Mississippi valley. The blood in a large number of these cases has been subjected to microscopical and chemical examination, and in fatal cases post-mortem examinations, which throw light upon the inquiries of this Honorable Court are as follows:

1st. The malarial poison produces profounder alterations and more rapid destruction of the colored blood corpuscles than any other known febrile agent.

2d. The destruction of the colored corpuscles takes place chiefly in the spleen and liver.

3d. The black pigment resulting from this hæmatin of the blood corpuscles, is frequently observed in the blood as it circulates in the vessels and capillaries in masses of various sizes and in the form of cellular elements.

4th. The black pigment is deposited in the capillaries of various organs and tissues, as those of the liver, medulla of the bone, brain and subcutaneous tissue.

5th. The peculiar sallow, greenish-yellow and bronzed hue, which characterizes those who have been for a length of time subjected to the prolonged action of the malarial poison or to its powerful action in pernicious remittent fever and in malarial hæmaturia, is due not merely to hepatic and splenic derangement, but also to the deposit of pigment particles in the subcutaneous capillaries.

S. Did you make any further examinations of blood in this case, or in connection with the deceased? If so, state the result.

J. I examined bits of wood, brought to New Orleans, and placed in my hands by John H. Ilsley, attorney at law and counsel for the State. These pieces of wood, the one of cedar and the other of mahogany were spotted and coated upon the smooth side with blood. Microscopical and chemical examination revealed that it was human blood, and human blood, presenting similar pathological alterations to that examined on the particles of cloth, cut from the coat and shirt of the prisoner, and previously described.

The blood as in the first examination contained numerous black particles, and pigment cells and colorless corpuscles, containing round black pigment particles. Upon arriving in Donaldsonville, through the kindness of Dr. John E. Duffel, I visited the house formerly occupied by the deceased and found that the particles of wood fitted exactly into the front portions of two drawers belonging to two desks. Undeniable testimony established the fact that the blood on these pieces of wood was that from the deceased after the infliction of the blows on the head.

S. Have you preserved these pieces of wood? and if you have produce them before the jury and fit them in their places from whence they were cut, in the drawers which have been brought to this Court.

I. I have carefully preserved the pieces of wood upon my person from their first reception to the present time. They correspond exactly to the missing portions of wood in the drawers exhibited by the State before this Honorable Court.

S. Have you examined the blood of various animals, as for instance, reptiles, birds and domestic animals? And if you have state the general results of your examinations, and if the blood of these animals can be distinguished from that of man?

I. I have examined microscopically and chemically the blood of a large number of the indigenous fish, amphiuma, sirens, batrachians, ophidians, saurians, birds and wild mammalia, and also the blood of domestic fowls and animals, and can state that in fish,* amphibians, batrachians, saurians and birds, the blood corpuscles can be distinguished at once and beyond all question under the microscope, on account of the elliptical shape and nucleated centre; but in the case of the domestic and indigenous mamalia, a more critical examination is required; for in this class of animals the size of the globules varies within comparatively narrow limits, they have a flattened or disc-like form, and with the exception of the camel tribe, the outline of the disc is circular.

EXAMINATION ON THE PART OF THE DEFENCE.

D. Are you absolutely certain that the stains on the pieces of cloth, placed in your hands for microscopical and chemical analysis were caused by human blood?

J. The substances causing the stains presented all the chemical and microscopical properties of human blood or blood presenting a special pathological alteration.

D. Can you by means of chemical and microscopical examination of the blood determine any form of disease?

J. By chemical and microscopical examination, I am not able to determine every form of disease.

D. You would then be in doubt concerning the result in certain diseases of the chemical and microscopical examination; please

*The blood discs of fishes are commonly of a full elliptic shape; they present the largest size in the sharks, but are smaller in them in proportion to the body or mass of blood than in the batrachia. The white corpuscles are in less proportion in the blood of fishes, than in saurians, birds or mammals. In my physiological and chemical researches, published by the Smithsonian Institution in 1856, I endeavored to establish the comparison of main physiological importance between the blood in different groups of vertebrates, namely: that which relates to the proportion of the organic matters contained in the water. It was then clearly shown that the blood varied in the different classes of animals in physical and chemical properties. The blood of reptiles has red corpuscles of a flattened sub-biconvex elliptical shape; proportionally smallest in ophidia, roundest in chelonians and largest in batrachia.

In birds the blood discs are more abundant than in the cold blooded vertebrates; they are nucleated, elliptic and flattened in form; averaging in size, in long diameter 1-2100th, to 1-3300th of an inch.

state therefore if there are any diseases, the nature of which may be revealed by the microscope?

S. The microscope enables us to distinguish clearly the changes induced in the blood by malarial fever. That condition of the blood known as leucocythæmia or leukaemia can be accurately determined by microscopical examination. There was no doubt in my mind that the blood examined was human blood, from one who had suffered and perhaps was at the time suffering with malarial fever.

D. What did you say was the average size of the colored blood corpuscles in the stains upon the cloth? and whilst giving this measurement, give those also of the dog, horse, rat, cat, rabbit, ass, ox, cow, pig, sheep and goat.

S. The average of the diameter of the blood corpuscles from the stains, was about $\frac{1}{3200}$ th of an inch. The corpuscles of human blood are larger than those of domestic animals. Thus the average diameter in the dog, is about $\frac{1}{3540}$ of an inch; horse, $\frac{1}{4600}$ of an inch; in the rat, $\frac{1}{3814}$ of an inch; in the cat, $\frac{1}{4400}$ of an inch; in the rabbit, $\frac{1}{4000}$ of an inch; in the ass, $\frac{1}{4000}$ of an inch; in the ox, $\frac{1}{4267}$ of an inch; in the cow, $\frac{1}{4200}$ of an inch; in the pig, $\frac{1}{4230}$ of an inch; in the sheep, $\frac{1}{5300}$ of an inch; in the goat, $\frac{1}{6366}$ of an inch.

D. Do not those individual blood corpuscles in man and animals vary in their diameter in the same specimen of blood? and if so state to the Honorable Court the causes of these variations.

S. The blood corpuscles of man and animals vary in their diameters within certain limits; thus those of man may vary from $\frac{1}{2000}$ to $\frac{1}{4000}$; of the dog from $\frac{1}{4000}$ to $\frac{1}{6000}$; of the hare from $\frac{1}{2000}$ to $\frac{1}{8000}$; in the ox from $\frac{1}{4878}$ to $\frac{1}{4444}$; in the sheep from $\frac{1}{5333}$ to $\frac{1}{6000}$ of an inch.

D. Difficulty exists therefore in distinguishing between the blood of man and domestic animals; and in view of this fact do you assert *absolutely*, that the stains in the pieces of cloth were human blood?

S. I admit that difficulties exist in such examinations. I affirmed that the human blood corpuscles upon an average were larger than that of the domestic animals named. I also affirmed that the stains upon the pieces of cloth presented all the characteristics of human blood.

I went a step further and affirmed that this blood presented pathological appearances which as far as my investigations extend, are peculiar to human blood in a certain diseased state, and that I have never observed such a condition in the blood of animals; and that the blood from the house in which the deceased was murdered presented similar chemical and microscopical characters.

D. Can the colored blood corpuscles be detected with accuracy in dried blood?

S. They can be detected in many cases; and they were detected accurately in the case now before this Honorable Court.

D. Can you distinguish between the blood of a woman and the blood of a man?

S. I cannot.

D. Can you distinguish the blood of a foetus from the blood of its mother?

S. I cannot.

D. Can you distinguish the blood of the different races of men? for example, can you chemically and microscopically distinguish the blood of a white man from that of a negro?

S. Different races are said to have distinct odors; sulphuric acid applied to blood will liberate the peculiar odor of the animal; I have upon many cases satisfied myself of the possibility of developing the peculiar odor of the blood in different animals by means of sulphuric acid. I cannot, however, speak positively with reference to the blood of the different races of mankind.

Verdict of Jury.—By the testimony of several witnesses, two of whom were practising physicians, *it was clearly established that, for some weeks before and up to the time of his murder Narcisse Arrieux was suffering with intermittent malarial fever (chills and fever).* The judgment of the jury rested to a great degree upon the presence of blood on the clothing of the accused Wilson Childers.

We have been informed by Mr. John H. Ilsley, Jr., one of the Attorneys for the prosecution, that an important witness testified as to the guilt of the four negroes accused of the murder of Narcisse Arrieux. The jury rendered the verdict guilty of murder with capital punishment.

CHARLESTON, SOUTH CAROLINA SURGICAL CASES.

By R. A. KINLOCH, M. D., Charleston, S. C.

We invite the attention of our readers to this paper from Professor Kinloch, not only for the lucid surgical teaching contained in the simple narrative, but also for the dramatic incident in the last case. We are prompted to ask why we do not see more from the pen of this able Charleston surgeon.

Surgical Cases.—By R. A. Kinloch, M. D., Charleston, S. C.

CASE 1ST.

Traumatic Lesion of Iliac Artery, with Complete Occlusion of the Femoral; Gangrene of Leg—Recovery.

January 6th, 1874, I was requested to visit J. F., aged 34, second mate of the Schooner Mary Powers, of Maine, which vessel had

arrived in Charleston Harbor on the 28th December, 1873, and was at anchor off the lower wharves. During a heavy storm, off Cape Hatteras, on the 23d of December, while ascending the rigging, and being half-way up the mast, a sudden lurch of the vessel caused the mast to break near the deck. While retaining his hold upon the rigging, and with left leg and foot entwined about one of the shrouds, man, mast, and rigging, were precipitated into the sea. The attachments of the rigging to the vessel prevented all from going adrift. Patient upon attempting to extricate himself and regain the vessel, discovered a complete helplessness, or partial paralysis of the left leg. He was finally dragged aboard by the seamen who went to his assistance. The upper part of the thigh, the groin and side of abdomen extending to the left loin, were severely contused, and the man rendered so painfully helpless, that he had been confined to his bed up to the time of my visit. Soon after the vessel reached her anchorage in the harbor, he was visited by a competent physician, who, upon examination of his case, discovered only the signs of contusion of the parts already named, and prescribed accordingly. Not having been re-summoned, the physician in question did not repeat his visit. I was invited to see him because of new and serious symptoms that had more recently been developed.

Besides the evidences of severe contusion of the skin and subcutaneous tissue of the regions above named, there was present an oblong, rather prominent and fluctuating, but not pulsating swelling, about four inches long, extending from about the middle of Poupart's Ligament upwards and outwards, encroaching upon the left iliac fossa. To the feel this seemed to be composed of blood, partly coagulated and partly fluid. There was the usual discoloration of integument, indicating subcutaneous bloody extravasation. The foot and ankle were cold, and almost insensible. No pulsation could be detected in any portion of the femoral artery. There was marked debility, with corresponding constitutional disturbance, as indicated by quickness and smallness of pulse, anxious countenance, anorexia, etc. These symptoms all pointed to commencing gangrene of foot and leg, consequent upon arrest of arterial supply through the femoral vessels. I advised that patient should be at once removed from shipboard to the city, and confessed to a rather gloomy prognostic view of the ultimate result.

A private room in the City Hospital was secured for the sufferer, and he occupied this on the 7th of January. Through the courtesy of Dr. Buist, the physician in charge of hospital, I continued my attendance. The treatment was mainly hygienic and supportive. The symptoms of gangrene became gradually more confirmed, and finally a line of demarcation formed about the middle of the leg. The case was considered so interesting that a number of medical friends visited it upon invitation. The tumor in the groin had slowly increased, and an interesting question of diagnosis attached

to this. There was every reason to suppose an injury, perhaps a rupture of the external iliac artery. With some, the tumor in the groin was at once referred to this, and a traumatic aneurism suggested. The absence of pulsation was, in this view, explicable upon the presumption of extensive blood clot, with crushing, or perhaps, a kind of torsion of the main vessel. Another theory, while admitting injury of the vessel, and its occlusion by a thrombus, excluded the idea of rupture of its coats, located the bloody tumor in the subcutaneous tissue, and attributed it to rupture of small vessels only. To this view I decidedly leaned. The bloody tumor I regarded as too small and circumscribed to be connected with the laceration of a great vessel. There were no external appearances of filling up of the iliac fossa by blood clot; no indications of pressure any of the pelvic viscera; and I could scarcely conceive of the rupture of a large vessel in such a region without subsequent pulsation.

January 14th, 1874.—The line of demarcation in the leg having been fully established, I decided to amputate at the point of election, below the knee, and rid the patient of the gangrenous leg. This was accordingly done. The stump was almost exsanguinous, and resembled those where Esmarch's bandage is employed, prior to amputation. After two days, the border of one of the skin flaps gave signs of gangrenous action. This was touched with nitric acid. The gangrene showed no disposition to extend, and repair advanced slowly.

January 20th.—Subsequent to the amputation, the tumor in the groin began notably to increase, and contemporaneously there appeared signs of low inflammatory action. It was now evident that we had to deal with purulent formation. I resorted this day to an experimental valvular puncture, and gave ready exit to considerable grumous pus. There was no active hemorrhagic flow, as some had apprehended, and the question of traumatic aneurism was finally settled. The opening was subsequently enlarged, and the abscess cavity injected with a mixture of carbolic acid, alcohol and water. This was repeated daily, until the flow of laudable pus was so limited as not to necessitate interference. One month after the puncture of the abscess, the discharge had ceased, and the stump was all but healed. No pulsation ever returned in the femoral. Patient gained strength sufficient to warrant his discharge from the hospital, and his return home on the 7th of March, 1874. A year after this date, he again visited Charleston, active, in good health, and, in a measure, compensated for the loss of his leg, by having the command of a fine vessel.

I deem the case worthy of record, because—

1st. It illustrates a curious way in which one of the great internal vessels was injured, and, perhaps, I may say, occluded by a plug.

2nd. It is an exceptional instance of traumatic lesion and

final occlusion of an artery of the first class, without aneurismal formation.

3rd. It is eminently suggestive of nice questions in surgical diagnosis and treatment.

CASE 2ND.

Wound of Internal Jugular Vein of a Child, Consequent upon Removal of a Tumor of the Neck. Treatment by Plugging and Compression—Recovery.

In June, 1875, I was consulted regarding a tumor in the right side of the neck, of an interesting boy of four and a half years of age, the son of Mr. H., of Texas. It had existed for more than two years, and had diminished in size during that time; supposed to be a lymphatic ganglion, and had been subjected, by good practitioners, to a variety of general and local treatment. It was located above the larynx, on the right side of the neck, and overlapped the inner border of the sterno-mastoid muscle; was spherical, larger than a pigeon's egg, firm, but elastic to the feel, movable, and entirely painless. The child was well developed and robust, presenting no signs of a strumous diathesis, and was said to enjoy perfect health. The deformity, alone, annoyed his parents, and induced them to wish the growth removed.

I expressed a favorable opinion as to the safety of extirpation, and suggested this as the only reliable plan of treatment. I regarded the growth as a ganglionic one, or perhaps a fibro-cellular tumor, of new formation.

July 2nd, 1875.—Boy was chloroformed, and, with the assistance of my friend, Dr. Manning Simons, I proceeded to operate. A free incision was made over the tumor, parallel to the course of the external jugular vein, which had thus to be avoided. Having reached the growth, I discovered that it could not be "shelled out" from its capsule, as can usually be done with a lymphatic ganglion, but that a careful dissection was necessary. I conducted this with care, keeping close to the tumor, and, as I approached the deeper, or under portion, used the scissors, curved on the flat, in place of the scalpel. The growth dipped by a pedicle under the border of the sterno-mastoid muscle, towards the main vessels of the neck. I avoided lifting it by traction, for fear of accident to the great vein, and with the dread of the possible entrance of air in such an event. As a further precaution, when the dissection had been nearly completed by the scissors, I finished the extirpation by twisting off the pedicle from its deepest attachments. There immediately ensued a fearful gush of dark blood, which, however, I promptly arrested by thrusting my finger into the deepest part of the wound. My friend, Dr. Simons, was then requested to prepare a conical plug and compress. These were soon in readiness. We had no styptic

present, but remembering some tincture of iodine, which I had about me for another purpose, I took occasion to dip the cotton plug into this before putting it into the wound. I next packed the wound lightly with lint. There was no recurrence of bleeding. A stitch or two, and a few strips of plaster, to confine an exterior compress, completed the dressing. I remained with the child an hour after he was put to bed, and then left him comfortable, but with much apprehension as to his future. At 3 o'clock, P. M., I was called to see him in haste. I found that alarm had been created by a slight oozing of bloody serum from one corner of the wound. There was no hemorrhage, so I simply enjoined quiet, and withdrew.

Upon making a visit at 6 P. M., I found that a messenger had been sent to summon me, because of decided hemorrhage. My friend, Dr. Buist, had been temporarily called in to give assistance. He remained, at my request, and rendered me valuable service. The tissues of the neck about the wound were infiltrated with blood, and the compress and external dressings all saturated. There was no hemorrhage now going on, but I saw at once that all the dressings must be changed, and an effort made to guard against a return of bleeding. The blood was evidently from the internal jugular. The lesion was at such a point in the neck that the attempt to ligate the vein, I thought, would be fatal. There was no space for making pressure on the distal side of the wound, to control bleeding, during a search for the vessel; bleeding too, from the cardiac side was to be expected, and the age of my patient was not such as to make him tolerant of loss of blood. The case was far more serious than a wound of the carotid artery. I determined to change the dressing and renew the plug and compress, with the addition of a good styptic. Having prepared a mixture of one part of sol. per sulph. ferri, to two of glycerine, and saturated several conical cotton plugs with this, the boy was put upon a table, and carried to a window, opening upon the piazza, which afforded both air and light. It was after sundown, and the light was fast fading. My little patient was wonderfully submissive, but provision was made for securing him during my action, which I knew must be resolute to give any chance of safety. The sutures were now cut, and the plasters removed. Pressing upon the compress and plug in the wound with the fingers of my left hand, I, with the right, quickly turned out the blood clot which infiltrated the tissues of the neck; then suddenly displacing the plug, I thrust two fingers to the bottom of the wound to take its place. There came, during this manoeuvre, a most fearful gush of blood, such as I never remember to have seen in any young subject; it was like the gushing out of water from the depths of a spring. The little sufferer made a convulsive movement, turned ghastly pale, rolled up his eyes, and, as I thought, died.

The flow of blood ceased. I watched the boy for a moment, and

saw that he breathed. Then I quickly cleansed the wound, and pressed in the styptic plug as I withdrew my fingers. Not a drop of blood afterwards escaped. An exterior compress was adjusted and fixed by strips of plaster, carried two-thirds round the neck. These means succeeded, and in a week my little patient was out of danger. The recumbent posture, with absolute quiet, was strictly enjoined during the week of anxiety. Fresh air, and milk diet, with a little wine, was the only treatment resorted to. The compress and plug were not disturbed until there was decided signs of suppuration; then these were carefully and slowly detached by introducing a few drops of carbolized oil into the wound several times a day.

A part of the history of this interesting case, I feel warranted in adding, although it may be said to have no scientific bearing. The picture may serve to impress a useful lesson upon the inexperienced surgeon, and, sketched as it is from life, may illustrate the necessity of cultivating qualities so necessary to serve us in times of our greatest need.

At the time that the poor boy swooned under the fearful gush of blood, and when I could scarcely hope that he yet possessed life, his distressed father suddenly appeared at the window, within reach of the table. He looked at his son's face, and then, with agonizing voice, exclaimed, "Doctor, is his life in danger?" I replied that the situation was a seriously critical one, and begged him not to embarrass me by his action; that I would do all that was possible. He shrieked aloud, while he carried his hands to his head, "Oh, God! Doctor, is more help needed? Don't let the question of money stand in the way, but save my child!" I made no reply, but with my finger on the compress, which I had just adjusted, watched the boy with deep emotion. This was the greatest trial I have ever encountered during my surgical career. The heart-broken father was finally led away. The boy began to breathe. The temporal pulse again rose under my finger. I breathed more freely, as I felt that all was not yet lost.

That wounds of the internal jugular vein are among the most serious surgical accidents, no one will deny. That they are necessarily fatal, as was formerly maintained by high surgical authority, has long since been disproved. The best account of this subject is undoubtedly that furnished by Dr. S. W. Gross, of Philadelphia, in the *American Journal of the Medical Sciences*, Vol. 53, 1867.

It may not be inappropriate to conclude this report by briefly alluding to some of the points of interest presented by Dr. Gross, and which may not be fresh in the recollection of all members of the Association.

Out of 85 collected cases of injuries and operations in which the vein was wounded, there were 37 deaths, or a mortality of 43.52 per cent. The deaths are attributable to hemorrhage, primary or secondary, pyæmia, introduction of air, exhaustion, cerebral disorders, and epilepsy.

Gunshot wounds of the vein alone have been invariable fatal. The greatest number of accidents have come from cervical tumors.

As regards treatment, the two most efficacious measures are the ligature and compression. The former has been most generally employed, and, therefore, the recorded mortality is larger. Out of 40 cases we have 15 deaths, or a mortality of 37.5 per cent. Compression was used in 16 cases with 2 deaths, or a mortality of 12.5 per cent.

I must fully agree, however, with Dr. Gross, in believing that the ligature affords the best chance of escape from all the possibly unfavorable results. This should be double, or applied on both sides of the wound, to guard against reflux hemorrhage, and the entrance of air. There are exceptional cases, where the ligature cannot be applied, and then our hope must rest in plugging or compression, or in the combined use of these means. If styptics are used, they should not be of a kind likely to induce an escharotic action on the vessel, or to engender suppurative inflammation.

THE HEALTH OF WILMINGTON.

The annual report of Dr. A. E. Wright, Superintendent of Health of this city is before us. In a population estimated at 20,000 there were 385 deaths. We believe the estimate of population by far too large, and that 15,000 would be nearer correct. Even at this estimate the death-rate is small.

Among the whites there were 164 deaths, and among the negroes 231 deaths.

Thirty-nine deaths are attributed to *phthisis pulmonalis*—seventeen among the whites, twenty-two among the negroes.

Six deaths from *heart disease* among the whites; eight among the negroes.

Thirteen deaths from *old age* among the negroes—three females and ten males.

Diphtheria claims only twenty victims, seventeen being among white children.

Typhoid fever, fourteen deaths.

Cholera infantum, twenty-two deaths, the highest number being in July.

Marasmus, nineteen deaths, fifteen being among negro children.

Alcoholism, three deaths!

Malignant pustule, one death!

Of the malarial fevers:

Intermittent claims four deaths;

Congestive chill, eleven;

Remittent fever, six

We are satisfied that the diagnosis in many of these cases is not accurate, from the fact that no body is permitted to be buried, until the cause of death is certified by the attending physician, and some die without a physician. It therefore devolves upon the city physician to make a post-mortem diagnosis, founded upon the history of the case, and for the most part this narrative is from the mouth of some stupid negro or indifferent white, but it is not the fault of the city physician.

We are surprised to see that *phthisis pulmonalis* leads in the cause of death, and we are as much gratified to see that the *malarial fevers* claim so few, viz: twenty-one deaths.

If such good results are to be obtained in a city that allows its ditches to grow up in weeds, and back up water in some places under the houses, as is the case on 10th street between Market and Orange, and in other localities, how much better a report will we have when a timely warning is heeded, and the ditches already existing are *carefully attended to in the winter months*.

No city on the South Atlantic coast can show such advantages for drainage;—but few are allowed to run such risks from neglect.

We will mention nothing now of the atmosphere reeking with effluvia from cess-pools and privy-sinks, although we have a tabulated statement of the condition of the privies and their relation to dwellings and sources of water-supply, which we will show at some future day; all we wish to state now, is that the neglect of drainage each year puts us on the verge of an explosive epidemic. It is needless for the authorities to say “Were there ever such clean streets?” because we would reply “No!” but at the same time we know that it is only an outward cleaning of the platter; a sort of make-ready-for-inspection-day, with all the clean things in sight, and at the same time smothered putridity abounding.

When Dr. Wright can get all these matters done intelligently under his eye and by the aid of competent engineers, we will rejoice with him in seeing his death-rate from *typhoid* and *typhus* reduced to its minimum.

We notice one death from malignant pustule which for many reasons we would say is a mistaken diagnosis. A reference to

Trousseau's Clin. Medicine and Ziemssen's Cyclopædia will satisfy any one that malignant pustule (charbon) is a rare disease, having as its origin contact with diseased animals, and so far in this country is only known to the workers in horse-hair, most of which material is imported from South America.

In other respects there are such unsatisfactory diagnoses as "Marasmus," "Disease of the Heart," and "Congestion," as stated in the monthly returns from which this report is made, but which the Superintendent has adroitly eliminated. Dr. Wright deserves great credit for bringing this much light out of darkness, and if allowed more means will yet be able to put our health office on a sound footing.

OBITUARY.

FRANKLIN NEELY LUCKEY, M. D.

Dr. Franklin Neely, Luckey, died on Thursday, August 8th, 1878, at *Villa-Francia*, Rowan county, his residence, in the 56th year of his age. Symptoms of hemiplegia came on about two months before—slight at first, but gradually becoming more and more profound, until the fatal issue on the 8th.

Dr. Luckey studied medicine in the office of Dr. Pleasant Henderson, for many years the leading physician of Salisbury, N. C., and attended lectures in one of the schools in New York city, in 1845 or 1846. He commenced practice immediately after his return home near Thyatira Church, and at once became a busy practitioner. He was a close observer and an accurate student, and bestowed more care than usual for one so constantly engaged, in reading up his cases. He was among the foremost in every move to advance the interest of medicine in the county and State, and was a member of the Rowan County Medical Society and also of the State Society. He had for many years occupied a prominent place among the physicians of the county. He enjoyed a large and lucrative practice, and had made quite a fortune. He was much loved by his patients and friends, and his skill and patient care as a physician, were duly appreciated by those who secured his services.

He went early into the war as Surgeon to the 25th N. C. Regiment; was promoted, I believe, to the position of Brigade-Surgeon—that of Ransom's Brigade—where he served with distinguished ability until the close of the war.

He was elected to the lower house of the Legislature in 1870 and again in 1872; and was an able and diligent servant of his constituents for four years. In short, he was a good citizen and felt the responsibility of doing well his duty in every position he filled in life.

He had lived a bachelor until about four months before his death, when he married Miss Nora Neely, an accomplished young lady of Rowan County. He leaves his young widow and numerous relatives and friends to mourn his death, and the profession of the county has sustained an irreparable loss.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

By GEO. GILLET THOMAS, M. D., Wilmington, N. C.

N. S. M., aged 25. a book-keeper, of temperate habits, and active temperament; had been under treatment during the latter months of the Spring and Summer of 1877, for slight indisposition; seemingly due to indigestion, along with constipation. His chief complaints were flatulence, and an uncomfortably full feeling after even a spare meal. His appetite was good, and his general health, barring these symptoms, was first rate. There was no history of syphilis.

On the 20th of November he had a slight chill and fever, which yielded to quinine. He was advised to repeat the quinine in full doses on the 26th and 27th, which he did.

On the evening of 28th of November he reported at my office, with fever and intense headache, and was deeply jaundiced. His urine was heavily loaded with a thick brown deposit, which, upon examination, proved to be bilious matter with considerable albumen,

Nov. 29th. Temperature 100° F. ; pulse, 98 and full; jaundice well marked and general. Headache was intense ; and the hebetude which usually accompanies the disorders of the liver had set in. An aperient saline mixture was ordered for him—his bowels having been freely moved in the early forenoon by a copious draught of Hunyadi János water. There was no appetite, but he occasionally took soup and milk in small quantities.

Nov. 30th. Temperature 99.4° ; pulse 90 ; though he was weak and exhausted from the uneasy and restless night he spent, his sleep being broken by frightful dreams. The line of hepatic dullness had not sensibly changed from the healthy standard, though there was slight pain on pressure, all over the region of the liver, but not sufficiently marked to cause me any anxiety. Jaundice was still marked. Urine high colored, but less heavily loaded. Bowels acting less promptly under the influence of the saline mixture which was continued. Appetite still impaired, but he took more or less of simple food, chiefly liquid or semi-solid.

Dec. 1st. Passed another restless night, in spite of full dose of chloral hydrate and bromide of potassium. Temperature, 99.4° ; pulse, 90. Headache; dullness more marked, but no stupor; jaundiced still, and urine unchanged; two discharges from the bowels during the night, of thick tarry looking matter; ordered muriate of ammonia with sulphate of quinia. During the day he had frequent attacks of shivering. At a late afternoon visit I found the temperature reduced to 99°, and pulse down to 80; headache much less, and his condition so much more comfortable as to give strong hopes of a good night's rest and a change for the better in the coming twenty-four hours.

Dec. 2d. Slept well the first part of the night, but was disturbed in the latter part by a movement from his bowels. At 10 A. M., I found him in a semi-stupor, pulse weak and frequent; temperature 100° ; tongue and teeth covered with a thick brown sordes, a condition that had not been apparent before. Hepatic dullness is now for the first time less than normal and the pain is located entirely about the left epigastric region ; but not sufficiently severe there to cause any marked uneasiness unless considerable pressure is made ; ordered carbonate of ammonia with small quantities of liquid food alternately every hour.

12 M. Stupor quite profound ; temperature 101° ; pulse, 120 and weak ; had a moribund appearance ; kidneys and bowels both inactive, and a distinct urinous odor about his person. Treatment same, except the addition of small amount of whiskey. Dr. W. G. Thomas saw the patient with me and agreed in the treatment.

4 P. M. Condition unaltered.

7½ P. M. Pulse 120 but stronger ; temperature, 100° . Drew off three and one half ounces of dark brown urine, I could find only slight trace of the bile ; but after careful preparation of the different specimens, I found plentiful display of the crystals of leucin and tyrosin.

10 P. M. Condition same. Ordered fluid extract of colchicum in 10 drop doses every two hours.

1 A. M. No change in condition.

Dec. 3d, 8 A. M. Pulse 100, but not weak ; temperature not taken. Had retained the food and medicine during the night ; urine had passed involuntarily ; stupor still marked.

9 A. M. Dr. W. G. Thomas saw patient with me again. Pulse 100 ; temperature now 99° ; stupor not so deep ; had slight lucid intervals. The line of dullness for the liver is so reduced that it is difficult to determine the position of that organ, and the spleen is somewhat enlarged ; jaundice is slightly less marked.

12 M. Patient had been tossing, and more delirious than stupid, otherwise no notable change.

4 P. M. Condition slightly better ; ordered a diuretic along with the colchicum, which give every two hours.

8 P. M. Dr. Wood saw the patient with Dr. W. G. Thomas and myself, and these gentlemen continued to advise with me through the progress of the case. Temperature normal ; pulse 110. Urine passing quite freely, but involuntarily ; does not have such a dark stain as formerly ; no movement of bowels ; stupor not so deep.

9½ P. M. No change in last hour. Medicine as above had been given during the day, along with small quantities of food.

Dec. 4th, 9 A. M. Temperature normal ; pulse 108. Urine passing freely ; patient weaker, though the stupor was less profound ; sordes so thickly coated the tongue, teeth and gums that articulation was difficult when he was aroused and attempted to speak. All other treatment was replaced by sulphate of quinia in two grain doses every two hours, along with stimulants and food.

12 M. Temperature 99°; pulse 112. Restless; hiccough; urine passing involuntarily and freely; bowels inactive.

4 P. M. Temperature 99.7°; pulse 116. The icteric hue was disappearing; hiccough still persisted and the patient was picking at the bed clothes; stupor was still deep and there was a cadaveric smell, if I may so call it, about the patient. The only addition to the treatment was a small dose of Hunyadi János water.

8 P. M. Slight consciousness. Temperature 99°; pulse 104. Drew off three ounces of urine, which, after a similar examination to the previous one, still exhibited the leucin and tyrosin.

Dec. 5th, 9 A. M. Consciousness almost entirely restored. Eyes bright; temperature normal; pulse 104. Jaundice had almost disappeared; urine passed voluntarily. As the saline had not acted, gave enema, but it produced no result. Stopped all medicine and ordered food in small quantities every hour with stimulants.

12 M. Found him sleeping naturally. Pulse 104; temperature normal; easily aroused; sordes beginning to disappear from the tongue lips and teeth.

4 P. M. General condition same, except temperature had risen to 99°. Ordered nitro-muriatic acid and sulphate of quinia; except these, no change in treatment.

8 P. M. I found no notable change in patient.

Dec. 6th, 9 A. M. Patient had occasional restless sleep during the night, and the visit of a friend early in the morning excited him though his consciousness was imperfect. Temperature 99°; pulse 116. The prospects seemed as good as yesterday.

12 M. Had hiccoughed a good deal since the early visit; ordered less food and more stimulants as he was weaker.

4 P. M. Hiccough continued, and the temperature and pulse were about the same. No change in hepatic dullness, as he had been unable to make it all clear within two and one half inches of the right axillary line, and it had shrunk so far above the margin of the ribs that its exact position could not be determined. Food seemed to be digested; his urine was passing freely; though there was no movement from his bowels. Treatment not changed. Hiccough had ceased, and the condition of the patient was about the same.

Dec. 8th, 9 A. M. Patient had a restless night and towards day

relapsed into stupor. We found him materially worse and weaker. The change of clothes and bedding causing almost fatal exhaustion. Stimulants were freely administered, and at 12 M., he seemed in pain and was quite restless.

4 P. M. Temperature 99°; pulse 126; weak, restless and seemed in pain. Fearing that his bowels were the seat of pain from accumulated matter, we gave him half an ounce of Rochelle salts.

7 P. M. Medicine was purging and the conditions had all altered for the worse. Small doses of gallic acid checked the bowels, but he gradually sunk and died at 3 A. M.

It is much to be regretted that no post-mortem could be obtained.

The history of the disease seemed to have a fatal issue as prominent symptoms in the diagnosis.

The only cause I can assign for the development of this attack was intense anxiety which business relations has aroused, and overwork; but the literature of the subject is almost barren in facts, which might lead to any decision in this matter. Certain it is, that fright, anxiety, sorrow and other strong emotions have led to the sudden evolution of fatal jaundice, and to these examples it seems that this case can be safely added.

The apparent digestion, if not assimilation of food, was to us a puzzling state of things; seeing that his condition was such as to destroy all the powers of the alimentary canal. There was at no time, the chalky, white stools, that often accompany the suspension or diminution of the secretion of bile, and towards the last the disappearance of the jaundice, with the partial return of consciousness gave us a false hope that recovery might result. The small increase of temperature above normal, was always a prominent feature, and the irregular rise and fall was to us all inexplicable.

The urine was examined with great care, and I am sure that no mistake was made in this part of the diagnosis.

For the development of the leucin, the urine was concentrated and dissolved in strong alcohol. This solution was evaporated and the residuum dissolved in water, which yielded the peculiar globular and ringed crystals of leucin.

For the tyrosin, a solution of sugar of lead was added until further precipitate failed to be produced and this fluid after being filtered was subjected to sulphuretted hydrogen gas. The sulphuret

of lead was separated by filtration, and upon concentration of the clear fluid, the white needle crystals of tyrosin in bundles constricted at the centres appeared. Of course, it is understood that these crystals are microscopic.

It seems needless to occupy valuable space by any remarks concerning this disease; as the diligent student can find it fully set forth in the text books or in detail by Murchison in his valuable work on diseases of the liver. Its comparative rarity and the great mortality attending it, make it an interesting study.

CLINICAL REMARKS ON CONTINUED LOW TEMPERATURE.

By J. R. L., M. D.

As useful as the revelations of the thermometer have been, we are evidently in the alphabet of its application in clinical medicine, both as a diagnostic and prognostic means. In the South where we are constantly encountering fevers of a high grade of intensity, running the thermometer rapidly up from the normal standard to 105° or 106° , we have a state of things which would be quite alarming in a section where malarial fever did not abound. I recall one case now, a patient upon whom I had operated for complete rupture of the perineum and recto-vaginal fistula six days previously, when seen in the morning showed no symptoms of fever. At this visit, the application of the thermometer was omitted because of the favorable condition the patient was in. I saw her at 6 o'clock of the same day, and found that she had high fever, temperature 106.3° . At 7 o'clock it was 107.4° , and at 10 o'clock of the same night she died, the post-mortem temperature being 110° . Post-mortem examination of the body revealed complete union of the perineal surfaces. I was confirmed in my diagnosis of this case by a medical friend, both agreeing that it was a case of pernicious malarial fever.

But the case I ask your attention to is one in which a lower temperature than I have ever observed before prevailed for nearly a fortnight, the patient finally recovering, but left exceedingly feeble.

Mrs. B., a sallow emaciated woman, living in the margin of a tide-water rice-field, was slowly recovering from her confinement with her ninth child. She had had an enormous spleen for years, and was a typical case of what Southern doctors are so familiar with—chronic malarial anemia. She was attacked with fever in the fourth week after her confinement, and had also dysenteric discharges accompanied with nausea.

At the first visit the pulse was small but rapid, and the temperature 101° . This was the highest degree attained lasting two days, when it suddenly dropped to 97° , and finally to 95° , where it remained for several days with slight variation. Diarrhoea persisted until checked by enemata of alum water and laudanum. Vomiting was a prominent symptom, and the hands and wrists and extremities were cold, the patient insisting upon it that she was devoured by internal heat, and would not allow herself covered except with the sheet. She had great thirst and took ice with avidity. Many days, for hours at a time, the surface was bedewed with sweat, which may be accounted for in part by the use of the opiate. As the temperature would increase she became more tolerant of additional bed covering, until on the fifteenth day she complained of cold winds coming in at the window, and asked for more bed clothes. During all these days of lowered temperature, the mind was wandering, not as in delirium of fever, when there are rational periods during which the attention can be fixed for a short time, but it was a continual mental disturbance more like that of confirmed insanity.

I have repeatedly seen such cases before, but have known very few to recover. I have not made thermometric observations in them. I have reported this case because I did not generally believe it was possible for a patient to live at such a low temperature, for so long a time.

Before I close I must cite another case of excessively low temperature. It was a case of hemorrhagic malarial fever, in which the patient was taken with a chill on Thursday and died on Saturday. On the morning of Saturday the thermometer stood 97° dropping off in the evening at 5 o'clock to 95° , and keeping at this point, until just after death, (which occurred at 9 o'clock) it went up to 101° , as it was previously recorded. Lessons of great importance are daily learned by the habitual use of the thermome-

ter, and the physician who constantly uses it, will, instead of going to the pulse *first* to reveal the condition of his patient, learn to consider it as *secondary* to the thermometer. I enclose a thermon-

ogram of Mrs. B's. case as taken from my notes.

I have said very little of the treatment of this case because there was nothing unusual, except that I relied upon the sulphate of cinchonidia as a substitute for quinine, a course I now follow with great confidence.

SYPHILITIC NOTES.

By J. R. L., M. D.

D. W., a negro man aged about 45, was under my treatment three years ago for a Hunterian chancre. I required him to be under observation for twelve months, a plan I learned from the teachings of my master, Ricord, and to which I adhere whenever I can get control of my patient. D. W. did not have even a bubo, and was not kept from his work at all. Three months ago I observed that he was wasting, although there seemed to be no positive disease, until a diarrhœa set in. It would be monotonous to detail all the remedies I employed to check the flow.

Every afternoon there was elevation of temperature. Every morning a stage of depression. I adopted the anti-periodic treatment—giving cinchonidia quite freely—3 i. in twenty-four hours—for several days, lowering the temperature as long as the cinchonism lasted, but returning to the former condition as soon as intermitted.

The diet of the patient was completely under my control, and I rigidly adhered to a plan which seemed to me to furnish the maximum amount of nourishment and the minimum of intestinal irritation, at the same time aiding digestion by giving bismuth subnitrate with pepsin. In spite of all, emaciation progressed, and the diarrhœa although for short periods receiving a check, went on at a painful rate.

After four weeks of treatment I examined the anus and rectum, and found on the anus a moist looking eruption a little elevated with fissures of the mucous membrane,—in other words condylomata. I then diligently searched for the marks of syphilides, old cicatrices in the throat, on the arms, legs and genitals, but there were none. My mind was made up as to the cause of the trouble, and the mercurial in the form of hydrargyrum cum creta was administered, four grains three times a day. In twenty-one days every symptom of diarrhœa was gone, and my patient gaining flesh daily. To-day, three months after the anti-syphilitic treatment was begun he is almost entirely restored.

The lesson I learned from this case was, that in negroes we are too easily deceived as to the character of the trouble we encounter. Some of them are so black, that cutaneous eruptions are not readily

detected, and syphilitic alopecia in the pure negro is rare. We can seldom rely upon the clinical history, but this may be said of all syphilitics. Negroes are very unobserving, and one might have a chancre which to one of the sensitive white race would be intolerable, would not be noticed by him at all, and so added to that "proverbial mendacity of syphilitics," we have rarely any personal clue to antecedents.

The story of syphilis among the negroes is yet to be written, but when it is written, it will be horrible from a humanitarian standpoint, and exceedingly instructing clinically.

PHAGEDENIC CHANCRES.

Phagedenic chancres are quite frequent. In my limited experience I treated four cases at the same time. In only one of these cases was there any white admixture, the others being pure negroes. I had often thought in reading the enthusiastic statement of Bumstead about potassio-tartrate of iron being the born enemy of phagedena, that when I came face to face with the trouble, my victory would be easy. In neither of these could I make any impression, and in two of them the *constipation was obstinate*, experience quite contrary to the written opinion of syphilographers. I was happy to find in one case that Mr. Jonathan Hutchinson's observation were verified, viz : that a phagedenic chancre having its commencement in the prepuce generally confined its ravages to that tissue, and when in the glands generally to the glans and corpora. I do not see how this could have universal application enough to be called a "law ;" but it is well worth future study.

The course I found beneficial and finally curative was great cleanliness, and cauterization by means of carbolic acid. The patient is directed to prepare a water bucket with a plug near the bottom filled with warm water, placed at an elevation. The water is caused to flow from the aperture in the bucket, directed by a thick piece of lampwick. When thoroughly cleansed all through the undermined tissue, a camel's hair brush is used to apply the strong acid which whitens the tissue, and destroys the odor. The irrigation is kept up for a long time, covering at short intervals a space of three to four weeks. Opium must be given to ensure sleep, and food of the most nourishing kind employed.

With all this, the best success will be disappointment and weary

watching until one's patience is taxed to the utmost. This experience has not been confined to those patients in low state of health when attacked, for I have seen virulent phagedena in patients apparently well-nourished.

If iron does any good I have never been able to distinguish it, at the same time, tonics are loudly called for in this disease, and it would not be well to discard iron until it has been more distinctly pronounced inefficacious.

CONGENITAL SYPHILIS

among the negroes in our Southern towns is most alarming. A friend of mine tells me he rarely sees a negro or mulatto child entirely free from congenital syphilis or a suspicion of it, and that blighted ova, poisoned by syphilis, are on the increase.

I have occasion in the course of the year to treat many negro and mulatto children for wasting diseases, and syphilis is prominent among the causes. I say this emphatically, because a prolonged course of mercurial powder cures them or improves their condition, and this I have learned to regard as a confirmation of diagnosis. That is, if I have been treating a negro child with a chronic skin disease or other wasting disease after the third month of infant life, and it does not yield to other treatment, and the mercurial treatment is successful, I always feel quite certain that further investigation will lead me to some stage in the life of father or mother, from which it is fair to date the syphilitic epoch. Syphilis is all but universal, and in absence of statistics I should say this statement will be endorsed by others.

One more point I would like to call to your attention. Young mulattoes on being attacked with syphilis during the period of their development, present a most peculiar appearance. Their complexion in most instances becomes lighter by several shades, and the features become coarser, and the lustre of the eye dimmed; in other respects their development is not arrested, provided the treatment is adequate, but they apparently enjoy immunity from further attacks. I have seen one marked case of blanching in a mulatto man, not in patches, but a universal fading of the pigment, even of the eyes.

So far as we know, a long course of mercury, in doses not exceeding 1-24th gr. of bichloride of mercury with quinine, (the

latter rendering the patient more tolerant of the former) three times a day for three months ; or mercury with chalk 1 gr. three times a day ; or blue mass 1 gr. three times a day, either one, if it be adopted, not to be abandoned after three months trial, but suspended only for a short time to renew until the treatment covers a period of twelve months or even more. Of course the appearance of ptyalism will be an indication that the dose is too large.

THE COMPARATIVE CLAIMS OF LITHOTOMY AND LITHOTRITY IN THE TREATMENT OF STONE IN THE BLADDER, WITH REMARKS ON PROFESSOR BIGELOW'S NEW OPERATIONS OF "RAPID LITHOTRITY."

By W. H. VAN BUREN, M. D., New York.

Professor of Surgery in Bellevue Hospital Medical College.

(*A Lecture Delivered in the Preliminary Course, 1878*).

In studying the subject of stone in the bladder I have sought to answer these three questions : (1) how calculi come to form in the bladder ? (2) what consequences are produced by their presence ? and (3) how are we to get rid of them ? In answering the last question I assumed that in every case of stone, the surgeon has to decide which of three courses is the best for his patient : the operation by cutting, the operation by crushing, or simple palliation. The last mentioned course every conscientious surgeon is compelled in exceptional cases to advise, for, in view of the means for palliation at our command, and the moderate amount of suffering present in rare instances, the risk to life of either operation may be simply unjustifiable.

At the last surgical lecture, Professor Keyes demonstrated on the dead body the best method of performing the cutting operation ; it remains for me to give you a correct idea of what can be done by means of the crushing process, and to guide you in selecting the operation better suited for a given case.

Lithotomy is as old as Hippocrates, certainly, possibly older, and was for centuries in the hands of charlatans, until the science of

surgery having taken its origin in the cultivation of anatomy made the operation a legitimate surgical proceeding.

The highest success attained by lithotomy, before the introduction of lithotrity, was a percentage of 12 a 13, or 1 death in every 8 cases subjected to operation. These figures are the result of the researches of Sir Henry Thompson who collected and collated no less than 1827 fairly reliable cases and published his tables in 1865.

An aggregate of cases of lithotomy gathered from the records left by Cheselden, Martineau, Brodie, and Ferguson, 422 in all, gives 69 deaths, mortality of 16.5 per cent., or 1 in 6—a result which, even in the hands of these eminent operators, is not quite so good.

Thompson's estimate may be safely regarded as the grand result attained by the lateral operations up to 1865, about which time the increasing adoption of lithotrity began to affect, unfavorably, the death-rate of lithotomy.

A closer study of the cases collected by Thompson shows a remarkable difference in the mortality of the cutting operation in children and adults. As you see on the black-board, 1028 of his cases were under the age of 16, and these give but 68 deaths—a percentage of only 6.6, or less than 1 in 15; whilst the remaining 799, including all ages above 16, give 161 deaths—i. e., 20 per cent. or 1 death in every 5 cases. Evidently an important factor in the greater success of lithotomy in children, is the undeveloped condition of the sexual organs; for as soon as the sexual function asserts itself, the mortality of the cutting operation for stone begins to increase. The period of puberty is later in England than in our semi-tropical climate, in which the limit of childhood would be more correctly placed at 14. Below this age, with us, lithotomy would give, as far as I can judge, even a higher rate of success. Personally, I have never lost a child in certainly 25 operations, and probably more, for my records are imperfect. If attainable, I should estimate that the American results of lithotomy in childhood would show a rate as low as one death in 20. The point I wish to impress upon you is the great success that attends lithotomy under puberty.

On the other hand, after middle life, say over the age of 50, the mortality of the cutting operation is increased enormously.

According to Mr. Cadge, the cases above 50 years of age taken from the tables of Crosse, of Norwich, one of the most skillful of the English lithotomists, give a mortality of 31 per cent. or one in every $3\frac{1}{2}$ cases.

It remains to be seen if the mortality of lithotomy is to be lessened by the use of antiseptic precautions. On this point we have, as yet, no recorded evidence.

Sir James Paget has recently expressed a hopeful opinion that the dangers after the operation, from *cellulitis* and *erysipelas*—"conditions misinterpreted in the past as 'peritonitis after lithotomy, or urinary infiltration,' with no reference to their septic origin," may be lessened by the employment of antiseptics.

The causes of death after lithotomy, besides pyæmia, and those just mentioned, are, loss of blood, shock—which includes arrest of function in already diseased kidneys, and the other casualties which attend every capital operation. In favorable cases the relief to the great suffering which belongs to the disease is immediate, and in most cases, entire, and the result is usually a permanent cure, for cases of recurrence of stone after lithotomy are rare. Cross in 700 operations could only find 12 cases in which the disease recurred, and he adds that its chief cause is the leaving of a fragment at the first operation.

Let us now endeavor to get a correct idea of the crushing operation, and what it has accomplished. Civiale solved the problem that a calculus could be ground to minute fragments and evacuated from the bladder of a living man through the urethra, by his first successful case in 1821. His instruments were clumsy compared with those at present in use, his processes unnecessarily tedious, and his results—obtained, of course, from selected cases, were, with the pardonable partiality of an inventor who had succeeded in overcoming almost insuperable difficulties, too favorably stated. But the advantages of the new operation were sufficiently obvious to overcome prejudice and secure for it steadily increasing favor. until now, at the end of more than half a century, it has taken its place beside lithotomy as an established remedy for stone in the bladder. It has not done away with lithotomy, nor is it to be regarded as a rival in such a sense that a spirit of partisanship can be admitted in deciding upon their respective merits; but it is recog-

nized as a new resource, available in a certain proportion of cases, as attended by less danger, and capable of commanding a cure as complete, if not in all cases as prompt, as that promised by the knife. The surgeon, prepared to do either operation, must therefore determine, in the interest of his patient, which of the two processes is to be preferred as each case of stone presents itself, and the points by which he is to be guided we have now to examine. But I must first say a word concerning the details of the operations of lithotrity, which Professor Keyes will demonstrate to you to-morrow upon the cadaver.

The instruments first employed by Civiale were not only difficult in manipulation, but they were entirely straight. With the successive modifications which have gradually resulted in the lithotrites with short curved jaws now in use, the names of Jacobson, Heurteloup, Weiss, Charriere, Thompson and Reliquet are associated. Since the liability to clogging or impaction of debris between the jaws has been happily overcome, there seems to be little to be desired in the way of mechanical perfection.

The rules for applying crushing instruments originally taught by Civiale, have been transmitted to us by Thompson, with little change beyond increasing their precision.

The use of anæsthetics, and the prolongation of the sittings, with the effort to clear the bladder of fragments by means of pumping apparatus, constitute the chief innovations; and I desire you to note, especially, that these have been heretofore considered justifiable only in exceptional cases. The caution assumed to be necessary in order to avoid mechanical injury to the bladder by the instrumentation during the act of crushing seemed to justify the rule that each sitting, should be limited to two to five minutes; the sittings being necessarily repeated at intervals of a few days, (the intervals varying according to the condition of the bladder), until the last fragments are voided; sometimes many repetitions of the operation being required.

The conditions required in a given case of stone to render it proper for the crushing operation have been recognized as, 1st., a healthy urethra, of normal capacity; 2d., a calculus not exceeding an inch and a half in diameter, and not too hard in consistence; and 3d., a moderately sound bladder. Thus, a urethra too narrow,

either from malformation, or stricture, might not admit a lithotrite of sufficient strength, or, fragments might be afterwards arrested whilst escaping—a very awkward complication ; or, again, a stone too large or hard would require too bulky a lithotrite, itself a source of danger, and, if crushed, would furnish fragments so sharp, heavy and numerous as to risk intolerance of their presence on the part of the bladder, endangering acute cystitis ; or, finally, a bladder already seriously altered by disease would not bear either the manipulation required by the crushing process, or the subsequent presence of large and sharp fragments. These are, in a few words, the grounds hitherto considered valid as justifying the condition, which render lithotripsy proper.

It is in exceptional cases in the last category, i. e., where the stone is quite small, and the bladder very irritable, that rapid evacuation under an anæsthetic has been considered justifiable, and, in a few instances, has been accomplished ; also, where the stone has been small and removable at one or two sittings, the operation has succeeded after the dilatation of a strictured urethra ; but the attempt to crush too large a stone has been, confessedly, a not infrequent source of failure.

Thompson has taught us that the presence of an enlarged prostate, and even of an atonied bladder, are, by no means serious obstacles to successful lithotripsy. In fact, although the existence of atony involves the necessity of effecting the evacuation of the debris of the crushed stone through a catheter, it secures, at the same time, a degree of tolerance on the part of the bladder, which is a very positive compensating advantage. Ten years ago I removed a very large phosphatic stone from an old gentleman who had already relied entirely upon the catheter for seven years, since a prolonged retention caused by an enlarged prostate had left him unable to pass a drop of urine without its aid, and, within a year or two symptoms of stone had become so urgent as to threaten his life. I crushed his stone and succeeded in removing it entirely, through a large eyed catheter, in twelve or thirteen sittings. He has since been perfectly well, always relying upon the catheter, however, which he uses three or four times a day, and washing out his bladder more or less regularly, to prevent the formation of another stone, and is now, at the age of 80, in active health and free from any other infirmity.

These, then, are the limits within which it is claimed that the crushing operation may be employed for the removal of stone from the bladder with less risk to life than by the knife. What the exact risk is, on either side, it is not easy to express in figures, but a pretty fair approximation to certainty may be reached. Sir Henry Thompson recently presented to the Royal Medico-Chirurgical Society of London, an analysis of 500 cases of stone in the adult male—the sum of his individual experience; 422 of these cases came within the conditions I have stated, and were subjected to lithotrity, whilst 78 proved unfit for the crushing operation and were submitted to lithotomy. Of the 422 cases of lithotrity 82 died from the operation, i. e., 1 in 13 or $7\frac{1}{2}$ per cent. In an aggregate of 892 cases of lithotrity gathered from the recorded experience of Brodie, Ferguson, Liston, Kieth, Cadge, and Thompson, in which the operation employed was in accordance with the same rules, there were 74 deaths, i. e., one in every 12 cases, or 8 per cent. This latter is, undoubtedly, as fair and reliable an estimate of the ordinary death-rate of lithotrity up to the present date, as statistics can furnish.

If, now, you refer to the mortality of the cutting operation already accepted, it becomes apparent that for children, i. e., below the period of puberty, the knife offers the safer remedy; whilst for the adult, and especially for old men, lithotrity shows a much lower death-rate.

This conclusion, especially as to the preference for lithotomy in children, is admitted by all practical surgeons; I know of no authority who dissents from it. The lack of size in the undeveloped male urethra necessitates too slender instruments for the hard calculi encountered at this period of life, and at the same time prevents the easy escape of fragments, or the introduction of sufficiently ample evacuating catheters.

On the other hand, for the cases amenable to lithotrity which present themselves during the adult period of life, and in old age, confidence in the superior claims of the crushing operation has been slowly gaining ground. It has been subjected to trial by surgeons of large opportunities for a smaller or larger proportion of their cases, the proportion varying according to the preferences of the operator: some taking the cream of their cases, i. e., those with

small calculi, large and healthy urethras, and sound bladders, for lithotrity—making it the exception, and lithotomy the rule; others, a larger proportion, including more doubtful cases; and others, again, Sir H. Thompson, for example, adopting lithotrity as the rule, i. e., employing it in five cases out of six, and reserving only the cases of large stones, or of diseased urethra or bladder, for the cutting operation. Thus, Kieth, of Aberdeen, up to 1865, reports 276 cases of adult males, of which 116, or little more than a third, were selected for lithotrity, with a result of one death in $16\frac{1}{2}$ cases, or less than 6 per cent.; whilst the residual 160 subjected to lithotomy gave a mortality of 1 in $4\frac{1}{51}$ or nearly 24 per cent. Sir William Ferguson, up to 1865, in 219 adults had subjected 109, or one half to lithotrity, losing 1 in 9, or 11 per cent. Of his 110 lithotomies, 30 died, or 1 in $3\frac{1}{3}$. In 1871, Sir H. Thompson recorded 204 consecutive cases in which he employed lithotrity as the rule, (i. e., in 5 out of 6 cases), and lithotomy for the exceptions, with a mortality of 1 in 15.6, or 6.3 per cent. In his more recent presentation of 500 cases, in 1878, 422 were crushed, with 32 deaths, i. e., 1 in 13, or $7\frac{1}{2}$ per cent., and of the remaining 78 who were cut, 29 died—1 in $2\frac{1}{4}$, or over 37 per cent.

I bring these figures before you because they furnish the only accessible ground for judgment in deciding this question as to the comparative safety of the two operations; and I will ask you to notice that Thompson's death-rate, crushing five cases out of every six, transcends Kieth's, who selected the cream of his cases, by only $1\frac{1}{2}$ per cent.; whilst his lithotomy mortality exceeded that of the Aberdeen surgeon by nearly 10 per cent.; but, looking at the aggregate results of both operations together, Thompson lost but 12.2 of his 500 cases, whilst Kieth lost 16.3 of his 276—a conclusion which, whilst it is highly favorable to the methods of the London surgeon, tells practically in favor of employing lithotrity as the rule in adult cases of stone.

Admitting that statistics are fallacious, and “tell only half the truth,” it is difficult to avoid the conclusion that, in the hands of a judicious surgeon, an adult, or an old man, has a better chance for life if his case comes within the requirements for lithotrity, than if he is subjected to the knife; I beg that you will recognize, also, in this connection, how very important it is that vesical cal-

- culi should be discovered early, before they have grown beyond the reach of the safer remedy.

But, it is said, lithotripsy is liable to leave a certain proportion of patients with damaged bladders, and with more or less danger of recurrence, whereas lithotomy, when successful, cures more certainly and promptly. There is some truth in this, but as lithotripsy improves, the number of these unsatisfactory results will probably diminish ; and it is always to be borne in mind that, under lithotomy, a certain proportion of them would have died.

Another objection urged against lithotripsy, and a valid one, is the danger of acute cystitis after the first crushing, from the mechanical irritation of the resulting fragments which, in a uric acid stone of any size, are necessarily large and sharp. This is, in reality, a serious danger, heretofore met by absolute rest in bed for a longer or shorter time, according to the size of the calculus, until the very sharp edges of the fragments have become rounded off by friction.

The liability to cystitis after a first crushing has been heretofore attributed, in part, to the injury necessarily inflicted upon the bladder by the crushing instrument, but recent experience has convinced me that the danger to be apprehended from this source has been very much over-rated. Professor Bigelow, of Harvard, has discovered that the bladder is far more tolerant of instrumentation than has been hitherto assumed. This eminent surgeon has demonstrated, by the successful result of a number of very serious cases that, when the fragments produced by a crushing are promptly and thoroughly removed from the bladder through evacuating tubes by a caoutchouc pump, the instrumentation may be prolonged for an hour or more without causing inflammatory reaction, and that in this way a stone of good size may be safely removed at one sitting. He has also greatly increased the efficiency of the evacuating apparatus.

Since the publication of his paper on this subject at the beginning of the present year, I have employed Professor Bigelow's method of "rapid lithotripsy" in eight cases, prolonging the sitting from twenty-five minutes to over an hour, without any evidences of acute inflammatory reaction following in any instance, although more or less chronic cystitis was present in all ; and I am convinced that he

is correct in asserting that the bladder possesses a degree of tolerance of instrumentation far greater than has been hitherto recognized. In the last case, which occurred within a few days, a calculus of uric acid which measured an inch and a half in the jaws of the strongest lithotrite of the Weiss-Thompson pattern, and which required more than my strength to crack when first seized, was subsequently reduced to small fragments of uniform size by the Keyes instrument and entirely evacuated within fifty minutes, the dried debris weighing just half an ounce. There was no evidence of reaction on the part of the bladder, and the patient on the sixth day is doing perfectly well. Here was a case in which the fragments left by a first sitting of five minutes after the ordinary method would have been sharp, heavy and numerous, and if cystitis had followed, as I have witnessed, not unfrequently, in similar cases, it would have been ascribed in part also, according to Thompson, Cadge and all the authorities, to the instrumentation, especially as the heavy or "fenestrated" lithotrite was necessarily used in the earlier part of the operation. Whereas, after at least six times as much instrumentation, with the addition of several intervals of pumping, the bladder, having by this method been cleared entirely of fragments, gave no evidence of having sustained any injury whatever. The relief afforded to the long suffering bladder by the thorough removal of foreign sources of irritation, is the most obvious explanation of a result so novel—in view of the opinions heretofore held, as to the risk of such a proceeding.

This great improvement, if confirmed as such by farther experience, will constitute a "new departure" for lithotrity, for it will not only remove the most serious danger of the operation, and also do away with the liability to the impaction of fragments in the urethra, but it will render this mode of cure equally prompt and certain in its results as lithotomy.

Thus it seems probable that both the cutting and crushing operations will be hereafter improved, and it is natural that the later and newer operation should in this respect take the lead. Possibly the grounds for preference of either may change, and the rules I have given you for guidance will have to be reviewed.

It may seem strange that it should be reserved for an American surgeon, at this late day, to discover that the degree of tolerance of

the bladder has been "heretofore unrecognized," but even such an example of lack of acumen as this may prove to have existed, is not without precedent in the history of lithotrity. I have seen it stated that, shortly after Civiale's first successes, Weiss, the London surgical instrument maker, submitted to Sir Benjamin Brodie, a rack and pinion lithotrite with curved jaws which he had originated, and cracked hard stones with it; but the cautious surgeon rejected the new instrument because he believed the walls of the bladder would be seriously injured by the forcible contact of the fragments in the act of disruption. Subsequently Baron Heurte-loup, a continental specialist, had quite a successful season in London with a similarly shaped lithotrite in which a mechanism for applying percussion by means of a hammer to the male blade was substituted for the rack and pinion. After the tolerance of the bladder had been thus demonstrated Brodie adopted lithotrity, and has left us a valuable record of his experience.

PHYSIOLOGICAL FACTS.

[*From the Harvard College Advocate*].

The human lungs reverberate sometimes with great velocity.

When windy individuals indulge in much verbosity.

They have to twirl the glottis sixty thousand times a minute.

And push and punch the diaphragm as though the deuce were in it.

CHORUS.—The pharynx now goes up ;

The larynx with a slam,

Ejects a note

From out the throat,

Pushed by the diaphragm.

CLINICAL REPORT.

A CASE OF AMPUTATION OF THE LEG EIGHT WEEKS AFTER A SEVERE GUN-SHOT WOUND IN ANKLE JOINT—SUBJECT 62 YEARS OLD.

By J TAYLOR, M. D., Williamston, N. C.

J. G., aged 62. On the night of March 10th, the subject took his gun from a rack over his door and went out in his yard, returning, he replaced the gun as he thought, in its accustomed place and went to bed ; later in the night he got up to shut the door and in doing so the gun fell and discharged a large load of duck-shot and wad into his right ankle joint just below the external malleolus. I saw him next morning and learned that he lost a good deal of blood, and suffered much pain during the night ; he had recovered from the shock, was quiet with a weak pulse at ninety.

Upon examining the wound it was found that the range of the shot was inward and slightly upward ; the bones forming the ankle joint were completely shattered. The ends of tibia and fibula were also injured. I advised immediate amputation. The old man refused, saying he “expected to die and he would die with his foot on.” I then advised opening the wound removing the shattered bones, shot and wad, and trusting to nature. He refused to submit to any treatment.

Eight weeks after this, he again sent for me. Upon arrival I found him almost a skeleton, having suffered with diarrhoea, night-sweats, bed sores, and a profuse suppuration of the wounded joint. During several weeks, a large wad, thirty or more shot and eight pieces of bone had made their way out of the joint. The foot was much enlarged and saturated with pus ; the ends of the tibia and fibula were in a state of necrosis ; a good many pieces of loose bone still within the wound. I told him that amputation was the only thing that could prolong his life ; and that in his (then) condition it would be a very grave operation. He requested me to operate if it offered him any chance of recovery. The next day after, I operated, assisted by my friend, Dr. Halsey.

Dr. H. gave him one-third of a glass of whiskey and proceeded to give him the anæsthetic, composed of equal parts of chloroform

and ether, which he took kindly and was soon under its influence. I amputated at upper third of leg by the circular method ; there was but a little loss of blood, not to exceed six ounces. After securing the vessels and exposing the stump, in a few minutes all hemorrhage stopped, the flaps were brought together by interrupted sutures. Upon return of consciousness, which was prompt, he complained of severe pain in the stump, for which I gave him $\frac{1}{4}$ grain morph., hypodermically, which soon relieved him ; and in two hours he partook of a little nourishment and was quite comfortable. Left fluid extract opium to give him in case he suffered much pain, and applied cloths dipped in cold water to stump to be removed every hour. Next morning found him with high fever, and weak pulse at 140. Left for him four grains quinine and twenty drops of tinct. iron every two hours, and sufficient opium to relieve pain and produce sleep, and a tablespoonful of brandy in two ounces of milk every two hours. There was nothing remarkable about stump.

On the following morning I found that he had slept a good part of the night ; had taken soup and milk freely ; pulse stronger at 110 ; upon examining stump, found a considerable black spot on each flap ; reduced dose of quinine and iron and brandy one half, applied cloths wet in warm water to stump. Next day, pulse 100, appetite returning ; takes a little opium at night to procure sleep. Removed the sutures, washed out the stump and poured into it carbolic acid and glycerine, adding sufficient quantity of carbolic acid to glycerine, to smart slightly when applied to tongue ; applied same over the wound on a cloth. On the fifth day the black spots began to slough off, and the stump steadily healed by granulation. In three weeks he was out in his chair, and in six weeks on his crutches and at the end of ten weeks he was in better health than he had been for years.

I think it remarkable that he escaped all those diseases which generally prove fatal in such cases. The foot had been poulticed for nearly eight weeks, making the chances for systemic poisoning much greater than otherwise would have been. The carbolic acid and glycerine were the only applications made to the stump.

Although the gun was well charged and discharged in almost immediate contact with the foot, but one shot passed entirely through, showing the great strength and resistance of the joint.

SELECTED PAPERS.

THE CAUSES AND COURSE OF DISEASES OF THE HEART.

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M. D., M. R. C. P.

VALVULITIS.

In attempting to describe the different lesions and morbid changes to which the heart is subject, their course and progress will alone receive attention at the present. It is not intended in so doing to underestimate the value of a correct diagnosis. Far from it ! For a correct diagnosis includes a great deal more than the mere recognition of the physical signs—even than the detection of the precise time of a murmur, the exact spot of its maximum intensity, and the direction in which it is conveyed. Doubtless it is very desirable that this should be done in all cases, but we must bear in mind that, when this is all done, the diagnosis is not complete ; in reality we have got together only the material from which to commence to form a diagnosis. Having carefully noted the murmur, the next thing to be done is to ascertain if that murmur is connected with actual organic disease, or is but the phantom of morbid change. In order to do this with any approach to accuracy, it is essential that the mind be familiar with the nature of changes in the valves, their causes, the progress they make, the consequences of these changes, and the different modifications wrought thereby in the vascular system generally. Without this the morbid phenomena cannot be rightly interpreted, except by a lucky accident. For intelligent and systematic recognition of the true interpretation of a murmur, such knowledge is essential.

When, then, the Committee of this Hospital, recognizing the number of patients who attend the institution, and thinking it unfortunate that the practice of the Hospital should not be systematically used for the advancement of medical science as it might be, acceded readily to my request to start clinical lectures, and generously placed the theatre at my disposal, my first thought was, “ What subject shall I chose ? ” In determining this question there were two main factors to be entertained. The first was, my po-

tential fitness by acquaintance with the subject ; and second, how far would the experience acquired at this Hospital be of avail ? Having devoted some special attention to the disease of the heart, I determined to select the above subject. After some thought it seemed best to commence with the diseases of the valves, and then to consider hypertrophy and dilatation afterwards ; as the consequences of valvular disease throw much light on the nature of hypertrophic change, and the enlargement of the cardiac cavities. We know that the simplest form of heart is a mere pulsatile sac contracting at intervals in rhythmic measure ; and that as evolution proceeds, folds of the internal lining membrane are developed into valves by which the muscular force is economized. These valves prevent the backward flow of blood on the contraction of the muscular walls of the cavities. The blood no longer flows back or forwards on the muscular systole ; but is forced onwards by these folding doors preventing regurgitation. When mammalia are reached it is found that each chamber of the heart has got its two sets of valves—those which arrest the backward flow into the ventricle after it has thrown its contents into the aorta ; and those which prevent regurgitation into the auricle on the ventricular systole. These valve arrangements are very beautifully perfect. The three cusps at the base of the aorta and pulmonary artery carry each in their centre a small prominence called a corpus Arantii, a fibro-cartilaginous body from whence pass fibrous bands along the free edges of the valves the cusps are not readily ruptured ; though violent effort throwing strain upon the vascular system at times leads to a cusp being torn down to a basal point of attachment. These corpora Arantii close the minute triangular orifice which would otherwise be left betwixt the valves when the three crescentic cusps are driven together by the aortic recoil. In the auriculo-ventricular valves we see curtains thrown across the ostia sufficiently large to completely prevent regurgitation ; and in order to prevent their being washed backwards through the ostia on the ventricular contraction they are secured by tendinous cords to the interventricular septum and the solid muscular walls. These tendinous cords are not merely inserted at these points of contact ; they have each attached to them a muscular papilla, and these papillæ contract synchronously with the ventricle, and draw the

valvular curtains inwards during the systole. These valvular arrangements are exquisitely adapted to the fulfillment of their function—the prevention of the regurgitation of the blood when the ventricles close on their contents. The tricuspid valve is the least completely perfect of the four, and, when the right ventricle is greatly distended with blood, permits of leakage. This has been termed “the safety-valve action of the tricuspid,” and it is held by some that this is an advantage, as it prevents over-distension of the right ventricle. This I question most gravely, as in the diving mammals and the herbivora there is found a muscular band called “the moderator band of Reil,” which passes direct from the interventricular septum to the large outer flap of the tricuspid valve; and so holds the valve from yielding in the great stress put upon it in the long submersion of the sea-going mammal, and in the protracted flight of the herbivora from their carnivorous pursuers. But even with this comparatively imperfect valve, Oppolzer and Kürschner think regurgitation impossible without some contraction and reduction of size of the valvular vela by disease in them. As to the other three sets of valves, the vela and cusps are so perfect that they will permit of a certain amount of morbid change and diminution of size before regurgitation is possible. It is very important to remember this: as not rarely a long-persisting mitral murmur will disappear where there has been dilatation of the left ventricle with enlargement of the ostium; because when the ventricle and ostium are restored to their normal dimensions, the valvular vela are once more sufficient to close the orifice. It may be laid down as an axiom that all the valves—the tricuspid scarcely excluded—are so complete that they can undergo some amount of morbid change without permitting of leakage; but if the disease progress further, insufficiency is the necessary consequence. Such being the function of the valves, it is obvious that their arrangements are such that strain upon them will lead to trophic changes in them. These exquisitely perfect arrangements are, probably in consequence of their very elaborateness, the subject of inflammatory changes of a more or less chronic character. Acute disease is almost confined to the mitral valve, and may extend from the aortic flap of the mitral valve to the aortic cusps themselves. There are cases where one is compelled to believe that the aortic valves are

liable to acute disease especially in girls. In this difficulty in the present state of our knowledge we are driven to assume some original defect, or constitutional peculiarity. Dr. Peacock holds that congenital malformation is a factor in a large number of cases of aortic valvulitis. He found such malformation in eleven out of a total of forty-three cases observed.

Then there are ulcerative conditions of these valvular vela, especially of the mitral vela. Ulcerative endocarditis is usually found along with pyæmia, puerperal, or adynamic fevers. Here a destructive process exists, which may cut out a piece of a velum altogether, so that it may be washed away into the blood-current. But ulcerative endocarditis need not detain us here; it does not come within the scope of my lectures either in the way of prevention or treatment. A more chronic ulceration is found usually in the aortic flap of the mitral valve, when it is thrown against a prominent vegetation on an aortic cusp. An ulcer is formed at the point of contact, but we can exert no influence over this condition of things.

The truly important conditions for us, as practitioners, are the morbid changes, for which we may do something in the way of prevention or palliation, and that chiefly by our knowledge of the causes and course of the disease—with its natural history, in fact.

The first valve to be noted is clearly the aortic valve; and the consideration of its lesions will tell us much about the morbid changes in the other valves. As said before, the changes in the aortic valves are in the main of a chronic character. It is also broadly true that the form of aortic valvulitis found in young persons is usually that of aortic regurgitation; while in advanced life aortic obstruction is most commonly seen. The reasons for this are to some extent clear, and yet in other parts obscure. In younger subjects it would seem that when any trophic change in the valves is instituted it affects rather the free edges of the semilunar valves, and keeps along the fibrous bands extending from the corpora Arantii to the attachments of the cusps to the aortic walls. The consequence of this is that the cusps become diminished in size, though still comparatively flexible, and so offer but little obstruction to the onward flow of the blood at the ventricular systole; but

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are incompetent to arrest the backward flow of the blood on the aortic recoil. In older persons, as far as my observations have enabled me to form an opinion, when these chronic inflammatory changes are inaugurated in the aortic valves, it is the base of each semilunar segment which is first affected; and from thence the mischief extends through the body of each cusp. In older people, too, there is a great tendency to deposit earthy salts in any part affected by interstitial inflammation, the more too when the part is fibrous in its nature. Consequently, in aortic valvulitis in advanced life, we find these cusps, already chronically inflamed, have lime salts deposited in them, and so become indurated, or, as it has been termed, ossified; and the result is, they are thus rendered inflexible, and so offer a pronounced obstruction to flow of blood through them. Such is the morbid change wrought by aortic valvulitis in persons of middle age and advanced life. We see that the morbid process is different in the young and the aged; and we know that this is due to some extent to the freedom from calcareous deposits in the tissues of the young; and the decided tendency thereto in the tissues of older persons. The young are not, however, entirely exempt from such calcareous deposits. In addition to these changes in the valves themselves, it has appeared to me on investigation that certain changes go on in the arterial conus itself—usually hand in hand with the changes in the valves. My observations in various museums are not sufficient to warrant very positive statements, but I may say that the conclusions towards which they tend are as follows:—In cases of changes in the base of the cusps, that is, in obstructive aortic valvulitis, there appears to be pretty regularly a similar interstitial change in the arterial conus, which is contracted so that a condition of stenosis is produced; and betwixt this condition and the stiffened valves the obstruction to the forward flow of the blood on the ventricular systole is pronounced. On the other hand, where the trophic change has extended chiefly along the free edges of the cusps, and contraction of the semilunar segments been so produced, there is an absence of interstitial growth in the arterial conus, and a tendency to dilatation in it; so that the aortic ostium is enlarged, and the mutilated valves rendered still more incompetent, so that a decided condition of aortic insufficiency is established. Such are the broad impressions made upon my

mind ; and still further observation will, I believe, tend to establish them more strongly. Of course they are the well-marked types of each form of morbid change ; and there are all varieties of combined change betwixt them. A blended form, giving the see-saw murmur, is more common than either of the extreme forms just described.

In considering these chronic inflammatory changes in the aortic valves, it must be vividly borne in mind that they are trophic changes of nutrition, mere modifications of normal nutrition—a more or less free growth of connective-tissue corpuscles. The more slowly these develop, and the longer the process, the more perfectly do the corresponding muscular changes go on, and the more chronic the disease. The more swiftly they occur, the more they approach the form of inflammation with which we are all familiar. The more rapid the growth, the more extensive the valvular deformity produced, and the quicker the general progress of the case. Thus the briefest cases usually occur in the comparatively young ; the long, slow cases of aortic obstruction are found mainly in the old. Indeed, the trophic changes may be such that they can scarcely be called disease.

Some time ago, Dr. Wynne Foot described the condition of the right heart in a man who had long had chronically diseased lungs. Here the right heart was enlarged till its apex overlapped the left ventricle. Its walls were thick and its semilunar valve cusps were altered. Each cusp was more developed ; the corpora Arantii resembled those more pronounced forms seen on the aortic cusps. The pulmonary artery was as thick as the ordinary aorta ; in fact, trophic changes had gone on, giving increased strength to the parts, corresponding to the increase in the muscular walls, but not extending to what we call chronic interstitial inflammation. In this case the modification of trophic changes had achieved the end, and no more ; in valvulitis the nutritive changes are too rapid and too excessive—in fact, it is nutrition run riot. Dr. Foot's case illustrates what may be done in certain cases, but the more common result of increased trophic processes is what we term valvulitis. In these fibrous structures there is not so much an increase in the normal histological elements as in the growth of muscle—a true hyperplasia, but rather a growth of connective tissue corpuscles,

which strengthen the part truly, but which carry with them their invincible tendency to contraction, and so ultimately to distort the part. If we learn to look upon chronic valvulitis as an attempt to strengthen the valves when excessive strain is put upon them—a correlation of growth going on hand in hand with muscular hypertrophy—we will the more readily understand the nature of the morbid process. It is these modifications of normal nutrition which furnish us with the great bulk of aortic disease we meet with in practice. And it is these modifications about which it is necessary for us to be clear.

Having thus reviewed—all too briefly—the pathology of aortic valvulitis, we now come to its causation, and see how the two are linked together. We will find that strain is the great cause of valvulitis at the aortic orifice. Aortic valvulitis is very commonly found amidst great iron industries. It is very common in Leeds, where I first became familiar with it. Dr. Clifford Allbutt published in 1871, a pamphlet “On the Effects of Overwork and Strain on the Heart and Great Bloodvessels,” which added greatly to our knowledge of the subject. It is found that a distinct strain is put upon the vascular system during the violent efforts made by the men who wield heavy hammers during the time the iron is hot upon the forge or anvil. What this strain is can readily be perceived by any one who examines a “striker” at the end of each “heat,” as it is technically termed. The heart is beating violently and the arteries are throbbing. During these violent efforts, not only are the arms in action, but the whole muscular system is contracted, in order to attain such an attitude that the blows may be delivered with the maximum effect; so that there is a general obstruction to the flow of blood in the arteries. The consequence is that the heart hypertrophies, and thus contracts more powerfully; the blood pressure in the arteries is heightened, and the aortic valves are violently closed on each arterial recoil. The consequence is, we next get aortic valvulitis. But from personal observations on various strikers, I am inclined to hold that there is a certain amount of muscular disturbance which precedes the valvulitis. This often is sufficient to induce the striker to abandon his vocation. In others, where the muscular compensation is readily furnished, the case goes on to the more grave and precarious condition of valvulitis. Where

the muscle fails, it is better for the man as regards his prospects of life. In many of the cases of aortic valvulitis seen by me there has been the history of prolonged severe effort in various occupations other than "striking." In one man, an agriculturist, he had been famous for his prowess in pitching both hay and corn on to wagons when carrying home the crops. Dr. Peacock has found aortic disease in nursemaids and other girls who have had to deal with unduly heavy weights.

This question of strain causing valvulitis is now fairly settled, and such causation accepted. Any doubts about such etiology are put at rest by the notorious fact of the immunity from disease in the valves of the right heart until increased strain is thrown upon them by disease in the left heart, and especially the mitral valve; or, more rarely, by conditions of chronic disease in the lungs leading to obstruction in the pulmonic circulation. In i-tra-uterine life, too, where the stress falls upon the right heart, it is this side which is found chiefly affected by disease. It is the violent closure of the aortic cusps which sets up trophic changes in their free edges, extending from their attachments to the corpora Arantii; the connective-tissue corpuscles are developed along the fibrous bands, ultimately contorting the cusps and permitting the valve to leak.

The aortic valvulitis, so frequently seen in advanced life is also due to strain. Disease of the aortic valves in elderly persons is ordinarily associated with a gouty condition, or with chronic Bright's disease; and we know that in these conditions there is a persistent high arterial tension, as revealed by the pulse and demonstrated by the sphygmograph. This long-continued high blood-pressure within the arteries causes the condition known as atheroma; where there is an abnormal growth of connective-tissue corpuscles in the arterial walls, and along with this hypertrophy of the left ventricle. Side by side with these changes aortic valvulitis is commonly found. The increased strain on the base of the aorta from the heightened recoil causes the well-known accentuation of the aortic second sound (the evidence of the violent closure), and also causes that thickening of the base of the semilunar segments spoken of above. It is here where the morbid process is essentially chronic that we find the thickening of the arterial conus, the true stenosis, with the

deposit of lime salts in the neoplastic growth. It is in cases of chronic renal disease, with a heightened arterial tension, that we find the bulk of our instances of aortic valvulitis in elderly persons. Thus we see that strain upon the cardiac valves is the chief cause of chronic disease in them. Of course we are compelled to admit that there is in the valves of some persons a greater tendency to become affected by strain than is the case with others.

In estimating the probable course and progress of aortic valvulitis, the most important matter is the rapidity with which the disease in the valves has established itself, because a muscular growth of a conservative character is the only means by which the valve lesion may be compensated. And for this muscular growth to be established, time is a necessary factor. Where the progress of the valvulitis is slow, as in the stenotic changes of the aged, the muscular growth is steadily developed, and an hypertrophied ventricle balances more or less completely the narrowed orifice. Here there is increased obstruction to be overcome; and that is usually effectually met by hypertrophic muscular growth. Under such circumstances the progress of the case is slow; and, if the nutrition be fairly good, the new equilibrium may be maintained for a great many years. Indeed, most authorities agree that this form of valvular disease carries with it the best prognosis of all forms of valvular disease of the heart. There is no regurgitation; or if existing it is to a very small extent, and so the ventricle is not exposed to any increase in the force which distends it. This is a most important matter as we shall see when we come to consider the changes in the muscular walls of the heart—the subject of the next lecture.

But when aortic valvulitis occurs in younger persons it is most apt to assume the form of regurgitation. Here the prognosis varies from that of aortic stenosis; because, first, there is a regurgitant current driven backward by the resilient aorta on its recoil, and thus adding materially to the force by which the ventricle is distended; and next, the distortion of the valves is more rapid here than in stenosis, and so there is less time for the compensatory muscular changes to be developed. The increase in the distending force tends to produce dilatation of the ventricular chamber, and so to necessitate a larger muscular growth for a new balance to be

instituted ; while the rapidity with which the valve mischief progresses makes great demands upon the conservative and reparative powers of the system. Consequently we find that there is a second factor of great importance, and that is, the vigor of the nutritive processes of the individual in whom the disease exists. Having first estimated the amount of disease, and, as far as possible, ascertained its duration ; we come to the still more difficult part of our task, namely, calculating the powers of the individual. These will be found to vary widely in different organisms. In some the resisting power is very limited ; while in others compensation is maintained successfully for years. Such a case is mentioned by Niemeyer, of a huntsman in the Greifswald ; and Balfour states that he has known several cases where aortic regurgitation has existed for ten years. My own experience, so far as it goes, inclines me to hold with Dr. Peacock, that aortic regurgitation does not run a long course usually. I quite agree with the theory that it is the rapidity with which regurgitation is developed that affects the prognosis ; and Dr. Balthazar Foster has calculated that where such regurgitation has arisen from traumatic rupture, the progress of the case is about four years and a half. In such cases the demand upon the left ventricle is sudden and impetuous. The regurgitation is considerable as well as instantaneous. Dr. Foster has pointed out that the progress of such cases of sudden rupture of the aortic valves from violent effort is largely influenced by the fact of which cusp is torn ; if it is the cusp behind which there is no coronary vessel springing off, the prognosis as to duration of life is much better than if either of the other cusps is ruptured. This Dr. Foster made out by a brilliant feat in diagnosis, the correctness of which was established by the post-mortem examination. This rapidity of demand tasks the powers of the system very gravely, and the resisting powers of individuals vary considerably. Some, as we see, will resist the impact of aortic regurgitation for years, while others quickly succumb. With many there exists a strong impression that the resisting powers of women are less than those of men ; and certain there can be no question that conditions of morbid change in the heart, especially where the subject of muscular compensation is involved, are apt to be accompanied, or followed by, dilatation in women, with or without a certain amount of hypertrophy ; while hypertrophy is the rule with men.

In forming our prognosis, then, in each case of aortic regurgitation, we must be guided by the time which has elapsed since the first commencement of the mischief; the progressive or stationary character of the valvulitis, on the one hand, and the reparative or resisting powers of the individual on the other.

It is quite clear that the prognosis may be profoundly modified by the plan of treatment adopted. If the nutritive powers of the individual can be maintained by good food, attention to the digestive organs, and the steady administration of iron and, if need be, cod-liver oil, then the chances of a new equilibrium being attained by muscular hypertrophy are good. How long it can be maintained is a question which does not admit of an answer by any rule of thumb; each case has its own features and its own characters. Much, too, may be done by the administration of digitalis, which is admissible in all cases of aortic stenosis; but in regurgitation where there is a large, thick, and powerful ventricle its exhibition is not indicated; though when the hypertrophy is failing it is often of great service. Its utility depends upon the stage of the case at which it is administered. In all cases the demands upon the individual must ever be reduced to a minimum. An irreparable injury has been inflicted upon the mechanism of the heart, and a new equilibrium been necessitated: under such circumstances the comparatively unstable nature of this new balance must never be forgotten; it can only be conserved by the most watchful care and consummate skill in averting all avoidable demand upon it.

So much for aortic valvulitis. The next valve to demand our attention is the mitral valve. Its lesions are not inferior in importance to those of the aortic valve; while they are more frequent. The mitral valve is much more liable to be the seat of acute inflammation than is the aortic valve. Especially is this the case in acute rheumatism. The great bulk of cases of permanent disease of the mitral valve are the consequence, the sequel of acute endocarditis accompanying rheumatic fever; then, but far beneath, scarlet fever and chorea. Unquestionably chronic mitral disease is not rarely due to the strain to which the mitral valve is subjected on the ventricular systole. It has to resist a force equal to the distension of the whole arterial system each time the left ventricle contracts upon its fluid contents; while the aortic valve merely sus-

tains the force of the arterial recoil. The relations of aortic valvulitis with increased strain from the heightened arterial tension of chronic Bright's disease are now generally recognized ; but some cases have come under my notice which tend to indicate that such increased arterial tension may also set up chronic change in the mitral valve through the aortic incompetency. Here the valve is closed by the aortic systole, as well as the ventricular contraction ; and Traube has pointed out how sinister is the effect of this double closure of the mitral valves at each cardiac revolution. Strain, then, we must admit, is a cause of mitral valvulitis.

But there is no question that the bulk of cases of mitral disease are due to an acute attack of endocarditis, usually associated with rheumatic fever. The inflammatory storm which then passes over the vela of the mitral valve leaves its consequences behind it for long—resultant sequelæ usually felt during the whole remaining existence of the individual. There is no department of medicine where a careful observation of the changes wrought by acute disease can tell us more than is the case with the mitral valve when inflamed during temporary disease. It is a malady which rarely proves fatal at the time, is acute rheumatism ; but its consequences are felt in a large proportion of cases as long as the individual survives. But it may be gravely questioned whether the information furnished to us by the study of the morbid changes so brought about, has been utilized in practice to the utmost. The fact is, the lessons so taught us by the revelations of the dead-house have exercised a tithe of the influence which they ought, and will ere long, exercise. They teach a lesson as to the treatment of endocarditis which is as yet but very imperfectly appreciated. They indicate very distinctly what our line of practice should be ; and it is a very different line from that which now obtains. It really amounts to a reversal of our present practice. This strong expression of opinion can, I think, be pretty clearly demonstrated and maintained by the facts of the case. It is necessary for this end to consider what are the histological conditions set up during an attack of acute endocarditis.

In the first place, the minute vessels of the valves are congested, and there is a growth of cells immediately around them ; then this proliferation of young connective-tissue corpuscles extends through-

out the fibrous structure of the valves. The endocardium is inflamed, vascular, and velvety with the excessive development of endothelial elements; especially on the ventricular surfaces of the valves, which come in contact with each other at each ventricular systole. The proliferation of connective-tissue extends down to the insertion of the tendinous cords of the vela in their papillary muscles, and even into the muscular papillæ, which may be ultimately converted into fibrous structure. The tendency of pathological connective-tissue is to contract; and this process of contraction goes on after the acute rheumatism has disappeared. It is not during the attack that the mischief is done; it is only set up during this brief period. The connective-tissue corpuscles then thrown off work out their effects subsequently,; and we know only too well what these effects are. They are these. The contracting process either shrivels up the valves, especially along their free edges, rendering them insufficient, and so permitting of regurgitant leakage—a process aided by the shortening of the cordæ tendinæ till sometimes the valves and the muscoli papillares meet; or may be the cords are elongated and permit the valves to wash backwards to some extent on the ventricular contraction. Or at other times a process of agglutination goes on, and the valves become soldered together by this growth of connective-tissue, until the mitral valve is converted into a funnel-like projection into the cavity of the ventricle; or it may be that the two vela are converted into a sort of diaphragm with a slit in it—the “button-hole mitral.” In either case such ruin is worked in the mechanism of the valve that it no longer fulfills its function, but is converted into a rigid firm-walled ostium, obstructing the flow of blood from the auricle into the ventricle, or but imperfectly opposing its regurgitation on the ventricular systole. Whichever is the leading lesion, stenosis or incompetency, it is a serious matter. We know that there are all varieties and degrees of valve-mutilation so induced—from the very gravest forms soon leading to a fatal termination, from the obstruction thus set up in the vascular system, and the engorgement of the pulmonic circulation; to such slight changes that they do not impair the efficiency of the valve. We are, of course, more familiar with the graver than the slighter forms, both in practice and in the dead-house. We also know well that once a serious lesion is

established in the mitral valve a whole train of sequæ follow. And this is the case whether the mitral valve be primarily affected, or secondarily to pre-existing aortic disease. No matter how severe the disease in the aortic valves, so long as the mitral valve holds firm it is a question betwixt the left ventricle and the difficulties it has to encounter; and not rarely the ventricle succumbs suddenly, especially in aortic regurgitation. Why, will be apparent in the next lecture. Once the mitral valve is affected to the extent that it either offers an obstruction to the onward flow of the blood, or permits of its regurgitation on the ventricular systole, then a totally new aspect is assumed. This lesion at the mitral orifice causes *Rückwirkung*, as the Germans call it—i. e., backward effects of the gravest character. If the lesion be not great there is congestion of the pulmonic circulation; the blood flowing through the lesser vascular system is met at the mitral orifice, either by an obstruction or by a back-flowing current of blood; and so the current is dammed more or less. There is fullness of the pulmonary vessels, whose calibre is enlarged and their walls thickened; and along with these changes enlargement of the right ventricle, with an increase in the thickness of its muscular walls, follows. By such compensatory growth the lesion at the mitral orifice is more or less completely and effectually compensated; but this is only in the most favorable cases. Much more commonly there is the *Rückwirkung* behind the tricuspid valve, involving the whole venous system. It will be more convenient to consider this “back-working” in the next section relating to the valves of the right heart. At present we may more profitably consider what the lessons of the dead-house teach us as to the management of mitral valvulitis in practice.

It has been stated before that the practical lessons taught us by the morbid anatomy of mitral valvulitis are of the most important character. We know that during the acute inflammatory storm which passes over the surface of the valve there is an interstitial growth of connective-tissue corpuscles. This interstitial growth is set up by the acute endocarditis synchronous with the acute rheumatism. But—and this is the important matter—there are no grounds for holding the opinion that this interstitial growth, once set up, ceases with the articular rheumatism, though the endocardial murmur may disappear. On the contrary, we have every rea-

son to believe, if our knowledge of pathological processes is to be trusted, that this interstitial cell-growth persists for some time after the general symptoms have passed away. When the active development of these connective-tissue corpuscles has come to an end, the contracting process follows; and mutilation of the valvular vela and their attachments is the necessary and unavoidable outcome.

I think it is not exceeding the fair interpretation of this morbid change to say, that we possess no means by which this contractile process can be controlled. It goes on without our being able to arrest it; as steadily as the contraction of a burn. No one now holds that we can influence this contracting action of connective-tissue corpuscles of pathological origin, by the exhibition of mercurials, or even iodide of potassium, supplemented by ioduretted friction. Such faith, or rather credulity, pertains to a by-past time. But if nothing can be done during this contracting period; are we powerless to influence the course of mitral valvulitis? Certainly not. If we reflect properly upon the lessons taught us by observation of the pathological process, we may premise that the consequential contractile process bears a definite relation to the amount and extent of the inflammatory storm and the interstitial cell-growth which accompanies it; and remains after it has passed away, as regards the acute condition at least. Probably the tissues of some persons are more irritable, more disposed to take on this sclerotic, or contracting action than are the like tissues of others; but this does not bear on the argument. The extent of the cell-growth is the great factor in the amount of the succeeding contractile process. The question next arises, can we exercise any influence over the primary part of the process—the cell-growth? We have every reason to hold that we can do so. In all interstitial inflammations, as well as other inflammations, to give the affected part physiological rest is the most effective way by which the morbid process can be beneficially influenced. If the mitral valve could be placed at complete rest, probably the cell-growth would cease with the decline of the acute endocarditis. But such complete rest of the mitral valve is unfortunately incompatible with life. If perfect rest is unattainable, the nearest practicable approach to it is surely the best thing to attempt. The mitral valve is functionally active every time the ventricle contracts; and the

more vigorous the ventricular systole, the greater the strain upon the injured valve. I venture to think there is no fallacy in this argument. The value of physiological rest is as great to the inflamed mitral valve as to any other part of the body when the seat of abnormal processes. It is clearly our bounden duty under such circumstances to secure quiet, as far as is practically possible, for these injured valvular vela. And the means by which this is to be secured are simple and intelligible enough. We must avert all avoidable strain upon these structures until a state of trophic quiescence is reached. If rest be essential to a broken bone, and movement is followed by a greater development of callus; it is no abuse of the reasoning faculty to assume that rest would be equally desirable for inflamed valves, and to infer that functional activity must exercise a mischievous influence. The more strain is thrown upon the inflamed mitral vela, the greater the cell-growth within their structure. It is not unfair even to suppose that by such cell-growth in the valves partial physiological rest is [secured for them. If the velum be contracted and bound down to the muscoli papillares and to its basal attachment; or even the chordæ tendinæ do not disappear, but only shrink, and the contracted velum thus be put partially at rest, surely then functional quietude is practically attained. Or if stenosis be the direction taken by the morbid process, if the vela are soldered together, then physiological rest involve most serious ulterior consequences. They involve the practical destruction of the valve; and the consequent embarrassment of the circulation.

It is clear that what we must do, not only at a time of acute endocarditis, but for that subsequent period when the interstitial cell-growth is going on, is to reduce to the minimum the call upon the vela of the mitral valve. In order to do this effectually, the body should be kept at absolute rest in bed; and, in addition to this, the activity of the vascular system should be lowered, and the blood-pressure in the arteries diminished, by the systematic and persistent administration of vascular depressants. By so doing, we will secure, in the most efficient manner at our disposal, the nearest approach to physiological rest for the mitral vela. We should not only lessen the number of ventricular contractions in the minute; but we would materially diminish the strain upon the valve at each ventri-

cular systole. By so doing, we would certainly exercise an influence, and in all probability a pronounced influence, over that interstitial cell-growth—that development of pathological connective-tissue corpuscles, whose ulterior effects we have such good and valid reasons to dread. It does not require a long list of cases treated upon this plan to demonstrate its claims to our confidence; the question can be settled by our knowledge of pathological processes, and our capacity to reason upon that knowledge. To read the various articles that have been written upon the treatment of acute endocarditis, and to find that authority after authority based the claim of their treatment to our professional confidence upon the short time—the few days—which elapsed before their patients were discharged from the hospital, is enough to make one despair of the reasoning power of the species. If these physicians had kept clearly before their eyes the lessons of morbid anatomy, surely they would have recognized the fact that their action was just the most pernicious thing they could have done; that, in fact, if they had deliberately designed to prejudice the ultimate interests of their patients, they could have selected no line of treatment containing so many potential elements of success as the one they chose. It would almost seem that for some persons, and even highly educated persons too, some stern doom, some grim force, has debarred them from the exercise of their reasoning faculties. It is true that Dr. Sibson has observed the good effects of rest in the treatment of endocarditis, for he writes, “The whole chain of evidence points, then, irresistably to the conclusion that the extent, severity, and permanent ill effects of endocarditis were much greater in the series of cases that were not rigidly treated by rest than in the series that were so treated.” And this plan is advocated by other authorities. But even in Dr. Sibson’s lengthy article on endocarditis I fail to find any evidence that the plan of absolute rest was carried beyond the time of the acute symptoms; though in his still more recondite essay on Pericarditis he says, “Rest and support of the affected joints should be strictly maintained for several days after the disappearance of the local inflammation.” Yet even here he does not seem to realize fully the equal necessity for rest, that is, such rest as is practically attainable for the inflamed cardiac valves. The evidence which demonstrated the utility of rest at the time of

the acute symptoms does not seem to have set up any further reasoning on the matter, or to have suggested the continuance of the plan, until there were good reasons for supposing that the trophic disturbances in the cardiac valves had ceased, and thus the resultant distortion been limited. And yet it is obvious that if we wish to restrict the growth of connective-tissue corpuscles, and with that the ultimate mutilation of the valves, the absolute rest must be maintained for longer than several days, and even several weeks; the time varying with, and being in proportion to, the severity of the inflammatory storm.—*Medical Times and Gazette*.

[To be continued.]

Warts for Skin-Grafting.—Dr. Charles A. Leale, (N. Y. *Med. Record*, No. 409) says: “warts of the hand can be used with better results than small pieces of normal skin in skin-grafting, in consequence of being so easily separated uninjured, into numerous cylindrical rods of great vascularity and containing a large proportion of hypertrophied epithelium, which, when planted in healthy granulating tissue, readily adapt themselves to the new soils, receiving direct nourishment and quickly growing as starting-points for a new, smooth epithelial covering.”

“A good forensic medical expert should be a first-rate chemist, a sound physician, a skilfull surgeon, an accomplished obstetrician; and should join to these qualifications a fair acquaintance with the collateral sciences, a little knowledge of law, much common sense, and a power of readily expressing technical matter in popular phraseology; and, in the present state of our law courts, if he have the gift of incisive repartee, it will be an advantage.”—*Med. Times and Gazette*.

Dr. M. J. DeRosset has been appointed “Consulting Ophthalmic and Aural Surgeon to St. Elizabeth’s Hospital,” in New York city.

CORRESPONDENCE.

OUR NEW YORK LETTER.

Summary. MEDICAL COLLEGES: *Professor Otis's Inaugural Lecture—The Elevated Railway.* MEDICO-LEGAL SOCIETY: *Dr. Doremus on the Passage of Gases, &c., through Stone Walls.* ACADEMY OF MEDICINE: *Dr. Piffard on Eczema—Dr. Stimson on the cure of Aneurism by Packing with Catgut or Horse Hair—Chloroform, and Methods of Antagonizing its Dangerous Effects—Chloramyl?—Medical Death Roll from Yellow Fever—Yellow Fever Commission—Diphtheroidal Ulcer of the Frenum Linguae in Whooping Cough—*NEUROLOGICAL SOCIETY: *Dr. Seguin's Case of Facial Unilateral Paralysis—Dr. Spitzka on Asylum Reforms.*

46 WEST THIRTY-SIXTH STREET,
NEW YORK, October 8th, 1878.

As predicated in my letter for your August issue the Medical Colleges have opened with large classes, which at the present moment promise to exceed in size those of any previous year.

The opening lecture at the Physicians and Surgeons, by Professor Otis, was exceedingly fine, being a pointed moral application of the salient physiological facts which concern the department of medicine over which he presides.

Commencing with a graphic description of the nature and career of a bioplast, and of the manner in which its perfection is promoted, and of the causes, in the nature of excesses, deficiencies and perversions, which vitiate its integrity, he passed by easy progression through a succession of figures to present the parallels which this offers to the life-history of individuals—particularly the young who in entering upon their collegiate course find themselves exposed to the myriad snares which vice sets for them.

He dwelt upon the nature of the three "voluntary" diseases, and of the results which they entail; and spoke disparagingly of those physicians who hold and teach that the exercise of the sexual function is essential or even contributory to the perfectionment of health. It would be well if all inaugural lectures possessed some of the practical nature that this exhibited, instead of being filled

with that species of fustian which aids in stimulating those elements of the imagination which it were best to keep in abeyance, in view of the grave moral perils that surround the young student.

The medical discussion of the detrimental influence of the Elevated Railway has been continued with much partisan feeling, by some of the proponents and the question has now lost whatever it possessed of scientific interest.

It will be remembered that within the very first week of the opening of the Metropolitan line, a memorial was industriously circulated among medical men, and, under a question of privileges, read before two or three societies, arraigning it in stilted phrases, the railway as a destroyer of the health, happiness, intelligence and morality of the community; at least that is what it meant if it meant anything. The extreme nature of these propositions induced the Company to ascertain to what degree such sentiments were entertained by the profession at large, and this resulted in the preparation of a counter-memorial to the grand jury, which was signed by over two hundred practitioners. This second paper declared that after four months experience, the subscribers were unable to agree with the propositions of the original memorial; and that in the facilities which the Railway offered to the crowded residents of the city to acquire salubrious homes in the upper part of the island, it promised to be a blessing to the community. Only this and nothing more—and yet it was like a “red rag” to some of the accusers, and under a provision of a By-Law they caused a special meeting of the County Society to be called, for the ostensible purpose of discussing the matter, and then, as has been said, exhibiting so much animus as to induce many in the audience to suggest that personal rather than humanitarian motives were at the basis of their action. Of course it is not intended to affirm this, however much of that color some of the speeches possessed—perhaps all were guided by honest intents. It was pertinently submitted by several of different conviction that as yet no settled attitude could be assumed towards the question; and that at least experience furnished only negative conclusions. When a call was made for a citation of diseases that had been promoted by the operations of the railway, there straggled forward in the narration *two cases of cinder in the eye, and one case of synovitis*. It might

with the gravest gravity have been asked at this point whether these peccant cinders were recovered, and found to be stamped and marked with such seals and signs as betrayed their origin.

Could travesty go farther than this, or a more obvious auto-da-fé have been invoked in any argument ! A committee was appointed to consider the matter.

At a meeting of the Medico-Legal Society, Dr. Doremus made some interesting experiments, similar to those of Petenkoffer, of Munich, to show how pervious to air and gases are the walls of our dwellings. A thick stone of trap-rock or granite was taken and the open ends of tubes fastened to two opposite sides, and the stone and points at which the tubes connected with it were covered with asphalt and varnish, so as to be rendered as far as possible impervious. One of the tubes was connected with the gas-pipe supplying the building, and in a few moments the gas began to appear at the free end of the other tube, where it was burned or collected over water, having passed through the dense stone. The proper lessons which this teaches in reference to mephitic air and disinfection were lucidly brought out.

Dr. H. G. Piffard read a paper before the Academy of Medicine, on the "Local Treatment of Eczema."

I cannot help remarking here that the expression *topical* would be a more appropriate word than *local*, for in the word *topical* is implied external application to the diseased part however extensive, which is not as explicitly conveyed in the other word, an idea of limit being associated with it. However, we need not split the hair in this, nor further do more than stop to say that this disease should be pronounced *eczema* and not *eczema* as is common.

The paper was admirable and I extract some of its practical points. The local treatment is to be placed midway in importance between the internal, or constitutional, and the hygienic and dietetic. It is important to distinguish the stage in selecting the remedy to be applied. In the stage of congestion, soothing applications; sometimes nitrate of silver, solid, or in solution in spts. etheris nitros. When the epidermis is lost, and parts swollen—protection by ointment of zinc, lead, mercury, &c., is called for, care to be taken with the two last when a large surface is involved. To these may be added chloral-camphor (equal parts) of which ten grains to

the oz. of vaseline makes a good application. Hebra's ointment as commonly made becomes rancid. Crayons, or sticks of equal parts (proportions may be varied) of which wax and castor oil are very convenient, and admirably adapted to indolent cases. The best way to dispense ointments is in bottles or in cases of flexible metal to be squeezed out like shaving soap, or artists colors.

Water is painful and aggravates eczema, unless it be warm and contain some salines to increase its specific gravity, so as to prevent that endosmotic action into the papillary layer which is the cause of the pain. Dr. Bulkley recommends maceration in hot water. The fine photographer's graphite is an admirable dusting powder, particularly in the cracking eczema of the hands, but gives the appearance of being dirty. Dr. Martin's rubber bandages are highly recommended in crural and ulcerous eczemas, to be worn, making tight pressure, all day and removed at night. They greatly facilitate exercise.

The internal treatment was alluded to only incidentally, proportions of arsenic being the prominent feature.

Tincture of hamamelis (made from fresh twigs) was recommended; also mineral waters containing silicates (homœopathically?)

Dr. Stimson is pursuing the study of the cure of aneurisms by packing them through an aspirating needle with carbolized cat gut or horse hair. Reports are promised through the medium of the JOURNAL.

I shall hardly attempt to advocate in this city a more extended use of chloroform as an anæsthetic, as I had intended. The avoidance of it is universal. Many of your readers will remember the pleasant and efficient effect of very minute quantities of it, with DeRosset's rubber ball as the inhaler. The detrimental properties of chloroform reside solely in its tendency at times to depress the rythmical centres of circulation and respiration. There are many agents which antagonize this property, without modifying its anæsthetic effects upon the sensory centres. Dr. Gaillard, of Kentucky, has recommended the occasional use of aqua ammonia upon the inhaler, during the administration. Oil of turpentine has been suggested; and now Dr. Sanford, of this State, proposes that the nitrite of amyl, which all chloroformists in the Southern States are in the habit of using, where bad effects threaten, be previously

mixed with the chloroform, and inhaled with it. He gives a formula for mixing one pound of *Squibbs* chloroform, and two drachms of nitrite of amyl, and calls the mixture *ehloramyl*. It is doubtless a good one, but the name is inadmissible, since it belongs to a possible definite chemical compound.

I think one or two drachms of this mixture given from the rubber ball inhaler would secure twenty minutes complete *anæsthesia* unattended with any danger. Other substances which antagonize the depressing influence of chloroform upon the centres of circulation and respiration are atropia, strychnia and digitalis, either of which could be given hypodermically with the happiest results, before commencing the inhalation—of atropia gr. 1-30th; of strychnia gr. 1-16th ; of tincture of digitalis gtt. xv-xx. All of these stimulate and tone up the action of the heart and lungs ; but morphia has quite the contrary effect, *and should not be given during chloroform anæsthesia*, since the tendency to death from morphia as from chloroform is through paralysis of these two vital organs. (See review of Fothergill in this issue.)

It is painful to note the continued addition to the death-roll of medical men, who have fallen at their posts, stricken down by the pestilence which is affecting the Southern land. The number already now reaches 65, and among them are many volunteers who consecrated themselves to the sublime duty. A sad instance is that of Dr. Kibbee who with the utmost confidence in the efficacy of treatment by cold affusion, on his fever cot, fell a victim as others have done.

His friends here bade him a sorrowful farewell as he left for New Orleans, one declaring that he was quite sure that within three weeks he would be numbered among the dead.

Surgeon-General Woodworth has appointed a strong commission, consisting of Dr. Bemiss, of New Orleans, Dr. Cochran, of Mobile, and Dr. Lloyd Howard, of Baltimore, to examine into the cause, nature, &c., of yellow fever. It is understood that the greater part of the expense of this commission is to be borne by a charitable lady.

Attention was called two or more years ago, first by Vogel, I believe, to a constantly occurring diphtheroidal ulcer of the frenum of the tongue, in whooping cough, and it was thought by some to

be a true pathological lesion characteristic of this disease. It has been noted by many writers, and latterly by M. Roger, and is now demonstrated to be only a traumatic injury, caused by the forcible protrusion of the tongue against the lower incisors, during severe paroxysms. If the disease is not violent, or if the child has no teeth, this so called lesion does not appear.

At the regular meeting of the Neurological Society, October 7, Dr. Seguin presented a case of unilateral facial atrophy. This disease is very rare, so far only five being found on record in this country, and about thirty abroad. In this case, a girl aged 15, the wasting was on the left side, and involved the connective "substances," muscular tissue, the dermis proper and over the superior maxillary bone.

There was no pain, and the muscular behavior to faradic and galvanic currents, did not differ in kind from those of the normal side, whether applied through the nerve trunks or directly to the muscles. Dr. Seguin was disposed, from the absence of a painful element in the symptoms, to believe that the lesion was not in the trigeminus. Dr. Hammond thought that this was not absolutely to be inferred. The pathogeny is not understood. How soft structures undergo actual atrophy may readily be appreciated, but the method in which bone, a dense tissue of unyielding shape, can without open lesion, shrink in size and proportions is a mystery to your correspondent.

Indeed, in this case it appeared to him that there was an arrest of development (relative rather than actual atrophy) of the hard structures, the cause which produced it invoking also a shrinkage of the muscular, connective, and integumentary tissues that overlie the bone. Could disease of the lymph channels be an element in the causation?

The treatment has never been formulated. Electric currents of various character, with changes in the kathodic and anodic applications, constitute about all that has been done; but these have produced no effect.

At the same meeting Dr. Spitzka read an able paper on the "Motives and Methods for Asylum Reform."

The propositions of the paper were unanimously adopted as the sense of the Society, and they appeared to be unassailable, but

it is sure when published they will evoke a violent opposition from those who are interested in maintaining the present system of management, medical and administrative.

I am pleased to report the presence in the city of Dr. Staton, of Tarboro', who is drinking his full from the well springs of knowledge which flow so freely here. DER.

Rupture of the Perineum without Implication of the Vulva.—At a meeting of the American Gynæcological Society, in September, Dr. Reeves reported a case in which a child had been delivered by the rectum and the vulva was left intact. Dr. Reeves reported it 1st, on account of its rarity, he having found only two such cases upon record; and 2nd, the great rarity of this common variety of central rupture of the perineum in multiparæ. He had not been able to find a single fair case of the accident occurring in the multiparous woman. The case was also interesting in a medico-legal point of view.

Some good Surgery in Spain.—The medical world somehow does not expect much from Spain in surgery, but we take pleasure in noting some successful ovariectomies reported by Mr. R. B. Taylor, of Santillana, and also that most heroic of all operations, the complete extirpation of the larynx, by Dr. Fred. Rubio, of Madrid. The operation was done in the most masterly manner conceivable, and during an operation which lasted two hours and a half there was not a single jet of blood. The patient died five days after the operation.


The Boston *Advertiser* says: Under the law substituting medical examiners for coroners, which has been in operation for a year. 178 deaths were investigated, and only 27 inquests held. The average expense of the inquests was \$6 60, and it is estimated that the saving to the county was fully one-third over the old way.

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED
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M. J. DEROSSET, M. D., 46 West 36th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

 *Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.*

YELLOW FEVER.

We have said nothing so far about the pandemic of yellow fever which has been ravaging the fairest portion of our Southern land, because it was only a continuous story of anguish and death, relieved it is true by the proud record which the true physicians and their allies the ministers and nurses and other valiant men and women have made for all time—but so vast in extent that the daily papers alone could give an adequate idea of it. The pest has devastated, it has brought death and desolation, it has deprived hundreds of homes of their heads, but it has also shown forth a heroism more worthy of us as a Christian nation, than victories in war. It has shown that the much talked of degeneration of the race is not a reality, but that we are a vigorous generation—quiet and retiring in times which call for no great sacrifice, but ready to accept death if it be in the way of duty, and the occasion requires it.

The medical and sanitary aspect of the question is the one in which we must view it just now. It is in order to inquire how the

invasion came about this year,—its mode of entrance into the delta of the Mississippi and its spread through that fair valley. The multitude of information necessary to be obtained to elucidate these points it is not possible to compute. Only earnest and patient and skilled enquiry can elicit the facts. It is therefore with great pleasure that we announce that Surgeon-General J. M. Woodworth, of the United States Marine Hospital Service with due diligence and promptness has, at the suggestion first of citizens of Memphis, and endorsed by the Medical Society of the County of New York, appointed a commission to begin the important investigation. The three names already announced show wise discrimination, and doubtless the completed committee will be as well chosen. The names already announced are Dr. S. M. Bemiss, of the *New Orleans Medical Journal*, Dr. E. Lloyd Howard, of Baltimore, and Dr. Jerome Cochran, of Mobile. Mrs. Elizabeth Thompson, of New York city has generously contributed largely towards the expense of the investigation.

Of their work the outline cannot be forecast, as only actual familiarity with the scene of devastation can suggest the devious routes through which they must pass to get at all the truth. Even then, however learned and experienced this commission may be, they cannot enter upon their duties with any promise of success except by the earnest support and aid of the entire medical profession of the afflicted section, and the intelligent aid of the recovered sufferers themselves. The amount of material necessary to be collected and weighed, errors to be reviewed, prejudices to be overcome must make the public patient for the result, and the investigators as swift in their conclusions as is consistent with a deliberate judgment.

It is chiefly with the means of prevention that the committee will spend its time, we suspect. Malignant epidemics are as merciless as they are unique, therefore the medical profession can never be so wise as to lay down a "law" of treatment, and this statement is as true of an epidemic of diphtheria as of yellow fever.

The practical questions are what is needed to make foreign quarantine more effectual; what is needed to render the hygienic conditions of the large cities and towns better; what if any new methods of inland quarantine. If it cost the nation millions in

works of engineering it would be well expended if it give promise of a hygienic condition so much better than now exists, as to promise a mitigation of the virulence of the terrible invader when he comes. All these matters must be pronounced upon by the commission, and if it be necessary to call into their counsels competent engineers they will doubtless recognize the necessity and act upon it.

It has puzzled non-professionals, especially the diligent readers of newspapers why there should be so much diversity of medical opinion as to the treatment of yellow fever. They do not seem to appreciate that the numerous medical men who figure in the secular papers with their "cures" are not always doctors in the true sense of the word,—the very fact of their so appearing proving this assertion. They are generally dreamers or charlatans—uneducated persons in short. Nothing can be known of the comparative value of the treatment until results have been patiently examined side by side, and even then conclusions must be arrived at cautiously until the competency of all the observers has been estimated.

This process is not new, it is the ordeal through which all remedies goes before they take their permanent place, and those persons awaiting revelation on the subject will probably be disappointed. The day may never come when the treatment of yellow fever will be as certain as that of the true malarial fevers, but we have the brilliant results of the past to stimulate us to future investigation. The knowledge that cinchona alkaloids cure malarial fever, that small-pox can be prevented by inoculation and by vaccination, are facts brought to light by research ; a knowledge of the remedy for yellow fever need not be despaired of—it certainly could not be more brilliant than the others named.

Valerian in Diabetes Insipidus.—Dr. Stephen Mackenzie, following the suggestion of Trousseau, gives *powdered valerian* in doses from 30 to 60 grains three times a day, for the treatment of *diabetes insipidus*, and with good success.

REVIEWS AND BOOK NOTICES.

STRICTURE OF THE MALE URETHRA ; ITS RADICAL CURE. By FESSENDEN N. OTIS, M. D. Professor of Genitory and Urinary Diseases in the College of Physicians and Surgeons, &c., &c. G. P. Putnam's Sons. New York. 8vo. Pp. 352.

It will be remembered by all careful readers of the various medical journals that Dr. Otis for several years past has been regarded as the originator and exponent of certain views concerning the detection and treatment of stricture of the urethra.

These views have been subjected to a searching analysis, but have been fully sustained by a majority of the most competent observers, not only in this country but also in Europe.

Our author had already presented the results of his study and experience in sundry able and attractive papers read before the medical societies, and these, after giving them further refinements and additions, he has now collected under one cover, where they constitute a most interesting and valuable volume.

It is not our purpose to give an epitome of Dr. Otis' views, or to say what his book contains, since we do not desire to afford even the shadow of an excuse to any practitioner for not providing himself with the work ; but we would state briefly and confidently that the way is clearly pointed out for replacing the old and almost worthless systems of treatment by methods which may be relied on for the speedy, safe and certain cure of that terrible ailment which has so persistently baffled surgical skill.

This phase of development in the treatment of stricture is illustrative of the steady tendency towards exactness which prevails in all departments of science. Without the aid of those two instruments of precision, the olivary bougie and the urethra-metre, the latter of which is wholly due to Dr. Otis' ingenuity, it is probable we would not yet be able to record this advance in surgery. Now, not only may a stricture be precisely located, and its actual calibre and linear extent be determined, but even multiple strictures, lying in close contiguity, may be separately defined, and their measurement, relative to that of normal portions of the canal may be so exactly ascertained as to furnish trustworthy indications for the kind and extent of operative interference required—information all-essential to success.

The fairness of our author in dealing with his subject is pleasantly exemplified by the fulness with which he admits into his book statements of the views of gentlemen who were disposed to differ from some of his fundamental tenets. Perhaps, however, it was thought that this introduced no element of weakness into his argument, since it opened at once the way for a full and final response to all objections, and enabled him to point out the erroneous data upon which they were based.

The assertion which Dr. Otis makes of superiority for his methods is no vague general claim, but is amply supported by extensive tables covering over 1000 cases.

The publishers have given the work a beautiful dress in all its details, so that it must prove pleasant to the eye of the reader, and can be ornament to the shelves of our book-case.

THE ANTAGONISM OF THERAPEUTIC AGENTS: AND WHAT IT TEACHES. By J. MILNER FOTHERGILL, M. D. Eden. Member of the Royal College of Physicians of London. Philadelphia. Henry C. Lea. 1878. 12mo. Pp. 160.

This book is the Essay to which was awarded the Fothergillian Gold Medal of the Medical Society of London for 1878. Dr. Fothergill's name to it is a guarantee in advance that it contains something of practical benefit to the profession; and we must confess that we have never followed any book through with so much interest, nor after reading one laid it aside with the same satisfaction of having added materially to our therapeutic knowledge. The object of the work is to record the trustworthy results of experiments with a number of well known drugs, in reference to their antagonistic effects as toxic or therapeutic agents, and the practical applications in therapeutics to be drawn therefrom. It is an essay in a branch of medicine which the author terms the "youngest born of the therapeutic family," and yet it is conducted with a degree and air of precision as if the paths had been well blazed and trod by previous experimenters. Chapter I records the experimental inquiry into the antagonism of various substances, and shows it to exist in an eminent degree between atropia and calabar bean (*eserina*); chloral and strychnia; chloral and calabar; morphia and belladonna (*atropia*); atropia and bromal hydrate; chloral

and picrotoxine ; atropia and aconite (a most important fact) ; atropia and pilocarpine (jaborandi) ; strychnia and nicotin. Between morphia and calabar bean no antagonism whatever was evinced. We need not stop to enquire into the lessons to be drawn from this, for they are suggested in the mere mention of it, but they are specifically pointed out in the subsequent chapters ; and we regret that a limited space forbids our enumerating many other points of interest and surprise developed in the course of the experimentation.

Chapter II is a practical enquiry, and no one can read it carefully without feeling that his knowledge and skill in the use of the drugs described have been greatly enlarged.

Chapter III treats of the rythmically discharging nerve centres, by which is meant those which influence certain physiological acts, viz. : respiration and circulation ; and from it we pass into Chapters IV and V where these matters are considered more especially and in detail.

Chapter VI is a most excellent one on the practical use of the "Antagonism of Drugs in Actual Poisoning," which we should learn so well as to make its lessons available, in those rare emergencies when every man feels that he would like to get at his library for about ten minutes.

Chapter VII is a summing up of the practical points of what has preceded.

In glancing over what we have written, it is with a sensation of disgust that we have so feebly and inadequately represented the value of this admirable little book. But space for thorough analysis is denied us, and we must content ourselves to add that the book marks a new departure in therapeutics, and he who fails to possess himself of its contents is criminally negligent in that he disregards a new source of knowledge which certainly offers the means to contend with greater power against disease and death. It is to be regretted that works of this sort are not more abundant, and Mr. Lea is entitled to thanks for his promptness in giving us this one, and at so moderate a figure—only one dollar postpaid.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY.
By W. S. PLAYFAIR, M. D., F. R. C. P., &c., &c. With notes
and additions by ROBERT P. HARRIS, M. D. Second American
from the Second and Revised London Edition. Philadelphia.
Henry C. Lea. 8vo. Pp. 639.

Probably this is the very best and most useful manual of Midwifery now available to the profession. It is written in lucid, scholarly English, which some of our cis-Atlantic writers would do well to imitate. There has been no attempt to swell the magnitude of the work by fine writing, or by lengthy discussions of obscure points of which no trustworthy solution has yet been reached; or the contrary, the tendency is throughout obviously towards simplicity. The chapter upon the Mechanism of Labor (which ought to be the crowning chapter in a treatise on obstetrics) is remarkably clear and good, and is divested of those features which in almost every other work we know lets only darkness instead of light in upon the subject.

Those portions of the work devoted to the consideration of instrumental delivery are peculiarly instructive, and are in accord with the sentiment which in America, in spite of the vague mutterings of sciolists about "meddlesome midwifery," is growing rapidly in favor of a speedy termination of labor. We are pleased also to note the author's opinion that the apprehensions widely held in reference to the danger of the forceps are much exaggerated; and we can easily trace in what he says about this a line of thought parallel with that evinced by Dr. Emmet in his masterly paper read before the Gynæcological Society, denying the agency of the forceps in producing vesico-vaginal fistula to the extent commonly held.

Dr. Playfair's work is, in every department, quite up to the very latest date; and, thanks to the excellent ancillary labor of Dr. Harris, the American editor, some new American ideas are included which were yet too recent to have found their way into the text book of our British confrères. We allude more particularly to the sections on laparo-elytrotony, and on the transfusion of milk—subjects which Dr. T. G. Thomas has so fully and ably exploited. The dedication of the volume to Dr. Thomas is very graceful, and will be accepted on this side of the sea as a national compliment.

The typographical and binder's work are in Mr. Lea's best style, and we are glad to see that the figures are so good as to be equal to what in scientific works should be their only function, viz. : that of *elucidating the text*.

A CLINICAL HISTORY OF THE MEDICAL AND SURGICAL DISEASES OF WOMEN. By ROBERT BARNES, M. D. London. Second American, from the Second Revised London Edition. Philadelphia. Henry C. Lea. 8vo. Pp. 784.

This second edition of Dr. Barnes' great work comes to us containing many additions and improvements which bring it up to date in every feature. It acquires new interest to us in being "under the imprimatur" (as he gracefully states it) of Dr. Fordyce Barker, one of our own eminent confrères whom all honor. The excellences of the work are too well known to require enumeration; and we hazard the prophecy that they will for many years maintain its high position as a standard text-book and guide for students and practitioners.

We think Dr. Barnes' Hellenic tendency in the coinage and use of terms in a department of medicine already plethoric with them will hardly be objected to by the average American reader, because we are accustomed to coins from our own mints which can match his mightiest efforts. A work which finds such wide sale amongst us and takes such a ready place on our tables alongside of the similar works of our own writers must have great intrinsic merit—and so this one has, and it ought to be in the hands of every practitioner who thinks that in a multitude of counsel there is wisdom—others may be neglected but not Barnes.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE. For the use of Physicians and Students. By JAMES TYSON, M. D. Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, &c., &c., &c. Second edition revised and improved. With illustrations. Philadelphia. Lindsay & Blakiston. 1878. (Price \$1 50).

The beautiful mechanical appearance of this volume is enough to attract if it had no real merit intrinsically. It offers to the student and physician clear and intelligible methods of determin-

ing the character of the urine, not a small matter when we consider how much such investigation is neglected, and how necessary it is to correct diagnosis. The student who does not commence early in his career with a habitual attention to the condition of the urine of his patient, will blunder through a life-time practice, neglecting one of the best of our diagnostic means. We quote this reference to indicate the investigation of which substance has lately attracted much attention.

“Dr. Harley believes that all the various colored urine pigments are but different grades of oxidation of urohæmatin, and thus accounts for the various colors of blue, green, brown, and black urines which have been at different times reported, a most important fact with regard to which is that they never exhibit these colors at the moment the urine is passed, but acquire them after exposure to the air or the action of chemical reagents. He believes these changes which occur in urohæmatin out of the body are primarily due to its constitution in the body having been altered by disease. He admits, however, in common with others, that some portion of the coloring matter of the urine comes from the food, chiefly vegetable food.”

Harley's—*The Urine and its Derangements*—has been largely quoted, to the manifest elucidation of the matter under consideration.

We know of no more concise and reliable guide in the examination of urine, and advise those of our readers who are wide awake to the needs of their patients, to add this to the other handy-books on their office table.

To the Editors of the North Carolina Medical Journal:

DEAR SIR:—I wish I could get a Medical Journal without so many typographical errors. Who does your proof reading? I notice you spell fullfill three ways. I have a case to report soon.

Yours truly,

We stand condemned but cannot publish any more correspondence on this subject.

SELECTIONS FROM FOREIGN JOURNALS.

APOMORPHIA.

M. Verger lectured before the "Congress of the French Association for the advancement of the Sciences," on the expulsion of foreign bodies from the œsophagus, by the aid of vomiting invoked by apomorphia.

A child had a prune stone lodged in the œsophagus, and as no suitable instruments were at hand to effect its removal and ipecac failing to produce emesis it was decided to administer apomorphia hypodermically. Two doses aggregating $2\frac{1}{2}$ milligrams (about 1-24 of a grain) were given, which induced vomiting promptly, and the stone was expelled.

The child went to sleep, its muscles relaxed, intellect became dull, pulse small and the respiration remained normal. Recovery speedily followed a dose of infusion of coffee.

Much larger doses than these are given.

ŒDEMA GLOTTIDIS IN LARYNGEAL PHTHISIS.

M. Gouguenheim read a paper on Œdema of the Glottis in Laryngeal Phthisis, of which it has been regarded as a frequent complication. He examined the larynx of great many persons dead of laryngeal phthisis, but found œdema in no case; these only limited swelling and hypertrophy. Important therapeutic indications may be deduced from this.

He did not claim that œdema never occurs but that it is much more rare than is commonly supposed. No symptoms pathognomonic of œdema glottidis have been observed. This view was supported by the citation of cases.

DIGITALIS.

M. Tessier, Sr. read a paper on the Therapeutic Effects of Digitalis. In spite of what has been written there remains much doubt as to the indications or contra-indications for the use of this drug. While certain authors would reserve it exclusively for the treatment of mitral lesions, others look upon it as *the* remedy in aortic affections.

About 1840, under the influence of the ideas of M. Bouillaud, digitalis was held to be exclusively a sedative. Later it was said

that it stimulated the cardiac innervation, and increased arterial tension; and M. Gubler wrote that it was not the "opium of the heart" but the "cinchona." After an experience of 35 years, M. Tessier concludes that there are few lesions of the heart to which digitalis is not suited; that it is in turn stimulant and sedative according to the condition of the organ. Taking sphygmographic tracings from conditions very dissimilar they all approach nearer to the normal type under the influence of digitalis. There is no contra-indication for digitalis either in hypertrophy or in aortic stenosis or insufficiency. With respect to diseases of the right heart they can only be benefited by agents which, like digitalis, increase the vis-à-tergo, and improve the circulation in the nerve-centres.—*Lyon Médicale*

INFLAMMATION VS. REPAIR.

Senftleben has instituted some interesting experiments in Coen-heim's laboratory which support the theories of his master in reference to inflammation. In order to ascertain whether in experimental keratitis the young cells were migrated white corpuscles or proliferations of the corneal corpuscles, he endeavored to observe them independently one of the other. For the first experiment he set up a superficial keratitis by making a slight central cauterization of the cornea, disturbing only the epithelium, and obtained no trace of leucocytes. Care in this experiment is important, for if the tissue proper of the cornea be disturbed it will imbibe the conjunctival liquids and leucocytes will appear. In this event the corneal corpuscles may readily be seen to proliferate and give birth to new corpuscles, not round cells.

For the second experiment the vitality of the cornea was destroyed without interfering with the movements of the leucocytes into and within its substance. The eye of an animal was placed in the stomach of another, and allowed to remain several hours, or a thread was passed through the globe care being taken not to wound the cornea; afterwards perfectly normal corneal corpuscles were seen, while the leucocytes were observed penetrating the tissue from the periphery towards the centre, escaping first from the vessels, and advancing either in the nutritive channels or in the peri-neural spaces.

The two proceeds differ essentially—the first is one of repair, while the second is inflammatory and destructive. They have nothing in common.—*Virchow Archiv.* t. lxxii, p. 542.

YELLOW FEVER.

SUGGESTION OF A PLAN OF TREATMENT FOR YELLOW FEVER, TO BE USED BY THOSE WHO ARE UNABLE TO PROCURE MEDICAL AID WITHOUT DELAY.

Letter from a Physician.

CHARLESTON, September —, 1878.

To Medical Officers of Board of Health :

We propose to *publish a circular* for distribution, as you think best, containing some *plan* of treating the disease, which is efficient, safe and un hurtful, to be used by those who cannot have quickly the services of a physician. In yellow fever, *time* is almost every thing, for life is compromised by the *fever* of the first few hours. With a long and frequent experience of this fever,* we still firmly believe that many would recover—a very large proportion—if they would begin at the *very inception* of the attack, with cold sponging (or with towels) of the head, hands and arms with *ice water*, thoroughly applied and repeated frequently as the temperature rises, and for the first one, two or three days, if necessary. Give at the *beginning* fifteen, twenty, or twenty-five grains of calomel, with the same of quinine ; follow, in three or four hours, with a dose of salts. Then *no more medicine*, save a little acetate of potash (four or five grains) with 1-8th to 1-12th of a grain of morphine, in a little water, used two or three times a day to quiet irritation. Place the feet in hot *mustard water*, and cover the abdomen with mustard plasters at the beginning, to be repeated. Use care with regard to food. If the *fever* is thus restrained and kept so by these means, in *fair* cases subsequent bad symptoms can hardly occur. There will be no black vomit if the fever of the first few hours is kept within bounds, for *then* all the mischief is *done*. This is all and it is enough, not too much nor too little.

N. B.—*No time must be lost at the beginning !*

The apparent simplicity of these measures does not detract from their value.

*See articles in "Charleston Medical Journal and Review" for Jan., 1858, March 1859, October, 1873, and January, 1877, for the proofs we have given of the efficiency of the method advised.

Those who are severely prejudiced against the use of quinine *may* leave it out, as we have no time for proof or argument; but we commend it highly for several reasons.

F. PEYRE PORCHER, M. D.,
Associate Physician City Hospital, Charleston.

At the regular monthly meeting of the Medical Society of South Carolina, held September 2nd, 1878, the following resolutions, offered by Dr. R. A. Kinloch, were adopted and ordered to be published :

Resolved 1st, That we witness with surprise and mortification the attempt on the part of the citizens of many sections of our country to institute a futile and oppressive system of *land quarantine* against yellow fever.

2nd, That this system, originating, as we believe, with a panic-stricken people, and supported by the teachings of theorists, is inconsistent with the most generally received views as to the origin and propagation of the disease in question, and opposed to the humanity of a civilized age.

3d, That we respectfully urge upon the profession, throughout the length and breadth of our land, the necessity of opposing this false and inhuman doctrine by every means in their power, if necessary, even, by an earnest appeal for legislative enactments on the subject.

4th, That we respectfully but most urgently advise our fellow-citizens of those localities where the invasion of the disease may seem imminent, to expend all their efforts rather in the removal of those causes, which, in accordance with the well established facts of modern science, are *known to be potent in localizing epidemic disease.*

5th, That we extend our most heartfelt sympathy to our fellow-citizens, who are now feeling the dire effects of the illegal and inhumane enactments referred to, and pledge ourselves to do all the good we can in our own State, to aid in their present deliverance, and to provide for their future security.

A true copy :

W. H. BAILEY, M. D.,
Secretary Medical Society of South Carolina.

YELLOW FEVER.

Une opinion sur la Fievre Jaune et du Traitement que plus conviendra pour sa guerison. Par J. A. Cezar de Vasconcellos. Elvas typographia da Democracia. 1878.

This little pamphlet of twelve pages has for its object the elucidation of the treatment of yellow fever. The author describes the course of the disease, dividing it into three stages. He holds the opinion contrary to some authors, that not only do emetics and purgatives not produce mischievous results; but that they do good by ridding the stomach and bowels of their offending contents. He prefers calcined magnesia as the laxative agent. As in yellow fever there is always diarrhoea, it is sufficient to employ it as an absorbent in small doses, frequently repeated. Furthermore, as in yellow fever, there always exists a morbid principle in the blood, (*principes eminent putréfacteurs*) and also as the febrile movement as a fire accelerates fermentative action which precedes putrefaction, he employs salicylic acid to counteract these conditions. The following is an example of his formula :

℞

Acid salicylic, 1 gramme

Acid sulphuric, 12 drops.

Warm water, 150 grammes.

Calcined Magnesia, 4 grammes.

m.

Minute directions are given as to the proper preparation of this formula, an account of which would be superfluous. The above is divided into two doses, and given at intervals of two hours. If after three or four hours there is amelioration of the symptoms, he repeats the treatment, though not the same day, excepts in desperate cases. When abatement of symptoms is clearly recognized in the interval he gives in four doses during the day the following :

℞

Salicylic acid, 1 gramme.

Alcohol, 6 grammes.

Warm water, 250 grammes.

Sugar, 30 grammes.

Citric acid (to taste).

The treatment commenced by the combination of magnesia and salicylic acid is relied upon, because at the same time the magnesia "absorbs the humors" and sweeps out the alimentary canal, the salicylic acid acts with more rapidity.

The following drink is to be given :

R

White of egg, 120 grammes.

Decoction of poppies or borage, 100 grammes.

Sugar, 40 grammes.

Orange flower water, 10 grammes.

Take three or four doses a day, between those of the salicylic mixture, if gastric irritation or the continuance of diarrhoea make it necessary. Large doses of salicylic acid are not so necessary in warm climates where all remedies act with more force than in the north of Europe. Our author is convinced of the efficacy of his remedies from the great supposed analogy between cholera morbus in its form of invasion and propagation, and yellow fever.

YELLOW FEVER.

Editors North Carolina Medical Journal :

GENTLEMEN :—Now that so many localities are being depopulated by this dreadful disease, which to such an extent baffles the skill of the profession, I trust that a few plain observations from one who has had experience with its management will not be unacceptable to your readers.

I will first speak of the

DIAGNOSIS.

It is unnecessary here to describe the pain in the head and back, the injected conjunctiva and other symptoms which are described in the books and are familiar to all. I only desire to direct attention to a sign which I regard as infallible. Every intelligent physician is familiar with the line upon the under gum, which so distinctly indicates mercurial or lead poisoning. The poison of yellow fever also has its peculiar mark for the gum. My attention was

directed to this sign in the early part of the epidemic which prevailed in this city in 1862. As soon as it was pointed out to me, I commenced looking for it in every case I saw, and *never failed* to find it.

An examination in the early stages of the disease will disclose a tight constricted and whitened appearance of the gum around the under incisor teeth which I have never seen under other circumstances, and so uniform and constant is this mark, that its presence or absence would be as conclusive evidence to me of the form of disease present as are the well known marks of lead poisoning or mercurialization.

TREATMENT.

As soon as the diagnosis is determined, *lose no time*, but immediately administer a full dose of a mild purgative, ol. ricini preferred, which will act in about three hours. As soon as it operates give quinia sulph. grs. xx., acid sulph., q. s., to make a clear solution. Follow with hot teas freely, and you will be surprised to see how quickly the febrile symptoms will disappear. Twelve hours after—half the above dose of quinine should be given in the same form. All solid food should be prohibited, but the system should be well sustained by frequent moderate supplies of liquid food and stimulants. Essence or extract of beef and weak brandy toddy are most desirable. If these directions are observed in the *commencement* of the disease, no other medicine should be allowed, and a recovery may be confidently expected. A delay of twenty-four hours, however, is almost certainly fatal. If there is any nausea or tenderness of the epigastrium a large cantharides plaster should be applied to the abdomen and continued at intervals if those symptoms return.

PROPHYLAXIS.

Many have fallen victims to the popular idea that the free use of alcoholic stimulants would prevent them from receiving it. I would not recommend habitual moderate drinkers to select as a proper time for reformation when an epidemic of yellow fever is at its height. The regular habits of life should be carefully adhered to at such time and all excesses avoided.

I will conclude by suggesting what I consider the most practicable means of arresting the disease. It has been well established

that freezing cold is the only sure precursor of the end of an epidemic of yellow fever. With what joy is the news received in the stricken city, "we had a killing frost last night."

The art of producing artificial ice and refrigerating machines has been so far perfected during the last few years that nearly all Southern cities now possess within themselves the means of reducing the temperature of rooms to any desired extent by the simple use of cool condensed air. A manufacturer of air compressors says: "we are able, without the use of ice or chemicals, to reduce the temperature of a given space very nearly to the freezing point if desired."

But I am treading on forbidden ground, in a communication of this character and so forbear speaking further of *the means* of producing artificial "killing frost." If those who desire to experiment in this direction, will communicate with me, I shall be pleased to assist them.

Respectfully yours,

THOMAS B. CARR, M. D.

Wilmington, N. C., September 17th, 1878.

CIRCULAR OF THE NEW ORLEANS BOARD OF HEALTH.

We give the following extracts from a circular at present issued in New Orleans, indicating the modes of treatment of yellow fever:

The onset is more apt to be sudden and violent than that of the other fevers which prevail here, and more apt to occur at night; frequently, but not invariably, a chill precedes the fever. There is violent pain in the forehead at the beginning, soon followed by severe pain in the lower part of the back. The eyes are red and glistening.

Any individual affected as above described should immediately go home, go to bed, and send for a physician without delay. Without waiting for his arrival a hot foot-bath should be taken, and perspiration encouraged by warm drinks and a moderate cover in bed. If there should be any delay in the arrival of the physician, a simple

purgative should be taken, and if the attack comes on soon after eating, an emetic of ipecac or mustard should be advisable. Prompt treatment is of the utmost importance in this disease, and it should be understood that persons ought not to walk about after falling sick, nor get up at all after once going to bed, until the attack is over.

Those who have not had the fever should avoid localities known to be infected, and should stay in their houses as much as possible during the night. Preventive medicines are useless, and free alcoholic potations are the worst preparation for encountering the fever. Regular habits, tranquility of mind, and moderation in all things should be observed.

It is recommended that all articles of clothing taken from a patient's person and bed be put in a five per cent. solution of Calvert's No. 5 carbolic acid. All discharges from a patient's body should also be treated with carbolic acid, together with any articles soiled by the same. As a further precaution, and to aid the board of health in their efforts, it is recommended to all householders, as far as they are able to do so at their own expense, whether there be cases of yellow fever on the premises or not, to disinfect their privy vaults and drains, and also the street gutters. A suitable agent for this purpose, being both efficient and economical, is a solution of copperas and carbolic acid in water, in the proportion of three pounds of copperas and one half pint of Calvert's No. 5 carbolic acid to a bucket of water. In case Calvert's No 5 cannot be obtained, Page's crude acid may be used,—one half pint in a bucket of water thoroughly stirred up.

The public generally are earnestly dissuaded from attending the funerals of yellow fever patients, unless circumstances imperatively demand it.

The stomach should be observed frequently, with special reference to nausea and tenderness under pressure. Other warnings of black vomit are great restlessness, sighing, respiration, and hiccough. With the occurrence of these symptoms, which do not usually precede the subsidence of the fever, apply a fly-blister to the epigastrium, and give ice, with brandy or champagne wine, if the pulse should be weak.

During the course of the fever all nourishment should be with-

held. On its subsidence it should be carefully resumed, in the smallest quantities, frequently repeated, and altogether liquid at first.

Alcoholic preparations are almost invariably demanded after the fever abates. The kind best relished by the patient should be selected, and used in small quantities, diluted and frequently repeated. Thus it serves as food rather than stimulant.

The above plan of treatment is mainly expectant, and is to be supplemented for special indications as they may arise. Extreme restlessness might justify the use of chloral by enema; but opium should never be resorted to after the first twelve hours. Severe headache with a strong pulse, in a robust subject, would justify local blood-letting at an early stage. On the occurrence of black vomit such hæmostatics as ergot, subsulphate of iron, and gallic acid might be exhibited.

Many physicians, myself included, are in favor of giving twenty to thirty grains of quinine with the addition of twenty to thirty drops of laudanum or Battley's sedative) at the very beginning of the fever, in two doses, at four hours' intervals, with the view of mitigating the neuralgic symptoms and promoting perspiration. The medication allays pain, promotes perspiration, quiets the patient, and allows him to enter the second stage of the disease in a much better condition. A few make use of special remedies, with a view to counteract the poison in the system or aid in its elimination, but such medication is regarded as only experimental, and is not recommended.

SAMUEL CHOPPIN, M. D.,

President Board of Health.

THE ROLL OF HONOR.

Additional deaths of medical men from yellow fever have occurred since our last report:

Memphis, Tenn.—Oct. 8th, Dr. O. D. Bartholomew, volunteer from Nashville, Tenn.; Oct. 10th, Dr. B. R. Montgomery, volunteer from Chatanooga, Tenn.; Oct. 13th, Dr. J. R. Force, volunteer from Hot Springs, Ark.

Vicksburg, Miss.—Oct. 11th, Dr. Happoldt, volunteer from Morgan-
 ton, N. C.

Port Gibson, Miss.—Oct. 9th, Dr. Thomas Young.

Greenville, Miss.—Oct 5th, Dr. J. S. McCall, Dr. A. S. Gardine,
 Dr. William Montgomery.

Brownsville, Tenn.—Oct. 8th, Dr. John J. Ware, President of
 the Board of Health.

Chattanooga, Tenn.—Oct. 13, Dr. E. M. Baird, Dr. R. N. Barr.
 Previously reported, '86. Total to date, 92.—*Medical Record*.

SANITARY REPORTS FROM NATIONAL QUARANTINE BUREAU.—No. 15.

OFFICE SURGEON-GENERAL U. S. M. H. S.,

WASHINGTON, October 19th, 1878.

*Abstract of Sanitary Reports received during the past week under
 the National Quarantine Act.*

New Orleans, La.—During the week ending yesterday afternoon
 there were 976 cases of yellow fever and 235 deaths, of which eighty-
 nine cases and thirty-six deaths occurred in the last twenty-four
 hours reported. Total cases 12,182, deaths 2,635.

No cases of yellow fever at *Port Eads*, or *South West Pass* dur-
 ing the past week.

Morgan City, La.—There were 16 deaths from yellow fever dur-
 ing the past week. The number of cases was incorrectly given for
 last report. Total cases to date reported to be about 432, total
 deaths 87.

Mobile, Ala.—For the week ending yesterday noon there were 56
 cases of yellow fever and 12 deaths. Total cases 93, deaths 32.

Decatur, Ala.—Seventy-three cases of yellow fever and 12 deaths
 during the week ending yesterday. Total cases 155, deaths 27.

Ocean Springs, Miss.—During the week ended yesterday noon
 there were 25 cases of yellow fever and 1 death. Total cases 128,
 deaths 29.

Pass Christian, Miss.—There were 32 new cases of yellow fever
 and 4 deaths for the week ended yesterday. Total cases 126,
 deaths 13.

Bay St. Louis, Miss.—During the week ended yesterday evening there were 52 cases of yellow fever and 12 deaths. Total cases 338, deaths 68. The fever is on the decrease for want of material. The cases occurring now are more malignant.

Friar's Point, Miss.—Eight cases of yellow fever and 2 deaths during the week ended yesterday evening. Total cases 21, deaths 6.

Crystal Springs, Miss.—The yellow fever is confined principally to the country around *Dry Grove* and *Lebanon Church*. No case has yet occurred within the limits of the village of Crystal Springs. During the past week there were 31 cases and 8 deaths. Total cases 112, deaths 44.

Baton Rouge, Miss.—During the week ended yesterday at 9 A. M., there were 301 cases of yellow fever and 16 deaths. Total cases 2,170, deaths 129.

Pascagoula, Miss.—Total cases of yellow fever at quarantine to Oct. 12th, 5, deaths 2.

Scranton, Miss.—Total cases of yellow fever to October 12th, 5, deaths 3.

Vicksburg, Miss.—For the past week there were 32 deaths from yellow fever in the city, and 64 in the county of Warren, outside of the city. Total deaths in city and county 1,074.

Holly Springs, Miss.—Total number of cases of yellow fever to yesterday evening 1,117, deaths 285. About 200 cases under treatment. The fever is spreading into the surrounding country. A slight frost occurred in the night of October 16th.

Grenada, Miss.—For the week ended yesterday evening there were 4 new cases of yellow fever and 2 deaths. The fever is spreading into the country. In fourteen families containing 97 unacclimated persons there occurred 41 cases and two deaths during the past week. Total deaths in Grenada and adjacent country, 327.

Baton, Miss.—Total cases of yellow fever to yesterday evening 117, deaths 31. The first case occurred August 12th.

Hernando, Miss.—During the week ended yesterday evening there were 50 cases of yellow fever and 23 deaths. Several of the cases from one to three miles in the country. Total cases 133, deaths 56. A light frost was observed this morning.

Memphis, Tenn.—For the week ended the evening of the 17th inst., there were 108 deaths from yellow fever. Total deaths 2,892.

Dr. Thornton, in charge of the Marine Hospital Service at Memphis, has the fever.

Chattanooga, Tenn.—One hundred and one new cases of yellow fever, and 30 deaths for the week ended at 4 o'clock P. M., yesterday.

Paris, Tenn.—No cases of yellow fever or deaths for the week ended yesterday afternoon. A frost has occurred and no further trouble is expected.

Milan, Tenn.—The first case of yellow fever—a refugee—occurred August 26th. The first case among inhabitants Oct. 12th. Total cases to yesterday 3, deaths 3.

Cairo, Illinois.—No report of cases or deaths received. Assistant-Surgeon Roswell Waldo, of the Marine Hospital Service, died of the fever at his post, yesterday.

St. Louis, Mo.—Four deaths from yellow fever at quarantine during the past week.

Louisville, Ky.—For the week ended yesterday there were 15 new cases of yellow fever and 5 deaths. Of these numbers, 14 cases and 5 deaths were among the inhabitants in the locality before described. Total cases 127, deaths 54, of which 89 cases and 34 deaths were among refugees.

Key West, Fla.—No new cases of yellow fever during the week, one death occurred the 12th inst. Total cases 37, deaths 17.

No reports received from the following places where the fever exists: Plaquemine, La., Port Gibson, Miss., Mississippi City, Miss., Greenville, Miss., Spring Hill, Miss., Water Valley, Miss., Biloxi, Miss., Canton, Miss., Brownsville, Tenn., Grand Junction, Tenn., Hickman, Ky., and Gallipolis, Ohio.

Havana, Cuba.—Twenty-four deaths from yellow fever and one from small-pox for the week ended Oct. 12th. The deaths from all causes, for the month of April, May and June last, were 3,030—an increase of 989 deaths over the total for the same months of 1877; of this increase 535 deaths were from small-pox, 98 from yellow fever, and 130 from diarrhoea. The deaths from yellow fever the past summer are recapitulated as follows: April, 28; May, 53; June, 184; July, 504; August, 374; and September (to the 28th) 168; making a total of 1,311 deaths.

Matanzas, Cuba.—Official returns of the Board of Health for the months of June, July, August and September, show that during

that period there were 279 cases of yellow fever with 91 deaths. Cases are now rare and the fever has almost ceased.

Morocco, Africa.—Advices from Tangier up to Sept. 21st, report the prevalence of cholera, small-pox and malignant fevers throughout the Empire, except in the country fronting the Spanish coast. Small-pox prevails in every port except Tangier and Teteran. The deaths from cholera at Casablanca—a port of 5,000 inhabitants—were on the increase, and numbered 103 on the 17th of September. Hundreds have died in the interior from cholera, fevers and starvation, especially in the middle and southern provinces.

JOHN M. WOODWORTH,

Surgeon-General U. S. M. H. S.

Note.—The above reliable summary comes regularly to our office, but reaches our readers much more rapidly through the daily press, and for this reason we have not published them. This summary brings us down to a recent date.

CIRCULAR LETTER TO PHYSICIANS AND OTHERS IN REFERENCE TO THE INVESTIGATION OF THE YEL- LOW FEVER EPIDEMIC OF 1878.

*To Physicians and others residing in the Cities and Towns visited
by the Yellow Fever :—*

Acting upon the advice of members of the American Public Health Association, the Surgeon-General of the Marine Hospital Service has organized a commission to gather and record all important *facts* relating to the commencement and spread of the present epidemic of yellow fever, with the view of establishing truths upon which the theory and practice of prevention of future epidemics may rest.

The gentlemen composing the commission—Professor Bemiss, of New Orleans, Dr. Cochran of Mobile, and Professor Howard, of Baltimore—have already commenced their work in New Orleans, and will visit the principal places in which the yellow fever has prevailed.

The cordial coöperation of all who have facts to communicate

bearing upon the subject under investigation is earnestly solicited for the commission.

- A preliminary report of the facts gathered up to the 19th of November next will be presented to the American Public Health Association, which will convene on that day in the city of Richmond, to discuss the report, and to advise the best course to be pursued in concluding the labors of the commission.

It is not intended to terminate the investigation on the 19th of November, but it is desirable that those interested in public hygiene in all parts of our country should meet in council prior to the assembling of Congress, as it is generally believed that legislative action will be promptly taken in reference to preventing future epidemics. The agitation of the public mind upon this important subject is proper and commendable, but herein lies the peril of hasty or not fully matured legislation, and it is hoped that by the action proposed Congress may have the benefit of the advice of the representative men of sanitary science.

The invitation of the officers and Executive committee of the American Public Health Association, extended for the Richmond meeting, is to "medical and sanitary authorities and other citizens who seek to promote the public health." This will afford an opportunity for all who desire to advise in reference to the work in hand.

If the voluntary contributions of money for the expenses of the commission are sufficient, it is intended to add to the commission a sanitary engineer, a microscopist, and a meteorologist.

The first step in the investigation is, as already stated, an examination into the causes of the commencement and spread of the epidemic, now being prosecuted by the commission.

The second step is the study of the natural history of the disease itself, which will be undertaken if the contributions of the money warrant.

It is believed that the study of the treatment of the diseases should not be added to the labors of the commission. The contributions of experience in this direction will doubtless be numerous, and may be properly left to the medical journals of the country and to individual reports. Very respectfully,

JOHN M. WOODWORTH,

Surgeon-General U. S. Marine Hospital Service.

Washington, October 10, 1878.

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M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } **Editors.**

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ORIGINAL COMMUNICATIONS.

INLAND QUARANTINE.*

By **R. A. KINLOCH, M. D.,** Charleston, S. C.

**Professor of Surgery, Medical College of the State of South
Carolina.**

The origin and mode of propagation of yellow fever are still unsolved problems in medicine ; nor are we any nearer their solution than were our progenitors of the last century. We question if we have been in any respect able, by means of modern science, to restrict the limits of this fearful scourge, or, during any epidemic visitation, to arrest its destructive march.

These truths come sadly home to us in this country, as we now

***MESSRS. EDITORS:**—It was my intention to have given a matured article upon the subject of Inland Quarantine, but the absolute want of time has prevented me from doing more than putting together the following crude reflections. I offer them for your acceptance or frank rejection. They will, at least, serve to explain the views I entertained in offering the resolutions that were adopted by the Medical Society of South Carolina on the 2d of September, and which you were kind enough to give a place in the last issue of your able Journal.

Very truly yours,

R. A. KINLOCH, M. D.

behold the potent sway of the pestilence in the great valley of the Mississippi, where, if it has not heretofore been a stranger, it has never made such triumphant progress. The law of self-preservation is the strongest stimulus to human energy and foresight in the face of threatened danger and death, and yet, supported as this has been by all the devices of modern science, and the ingenious appliances of art, it has signally failed to afford protection. This ought not to surprise us, however, when we remember our ignorance of the essential cause of the disease, or even of the special form of matter in which this exists, or the laws that govern its movement.

With the vulgar, the question of excluding disease from communities is a simple one, and their faith in the potency of human power and scientific application of means is stronger than it can be with our enlightened profession. Quarantine and sanitation are now, with the people, veritable superstitions. They are worshipped and implicitly relied upon. There are many too in the profession equally credulous in this regard, and some, though sufficiently informed, culpable enough to encourage the vulgar delusion, with the view perhaps of magnifying their own office.

It may be argued that it is necessary to calm the public mind, and that upon this ground quarantine serves a useful purpose. We question if public quietude is not thus often obtained at too high a cost, and if the reaction, that sooner or later must follow with the realization of truth, is not the evil the more to be dreaded. We cannot, however, now discuss this point, but will parenthetically express our earnest conviction that truth is ever the best policy, and should be diffused everywhere under an enlightened and progressive medicine.

We have little faith in the efficacy of any kind of quarantine in excluding epidemic diseases like cholera and yellow fever. With regard to the latter disease, it has visited many of our seaports about as often under a rigid quarantine as when there was practically none. I may name the port of Charleston as an example, because with the facts here I am best acquainted. During a past decade, as I am informed by a physician who then had charge of our quarantine, all vessels from infected ports, and many of them with fever on board, were detained only two or three days, their

cargoes not removed, and their holds indifferently fumigated, when they were allowed to come up and discharge cargo. We suffered from the disease, during this period, irregularly, not oftener than every second year, and escaped again and again while infected vessels lay at our wharves. As quarantine is conducted at most of our ports, even now, it is the veriest farce, and never strictly excludes *persons and things*. There are innumerable ways in which the most stringent quarantine laws that can be enacted with a republican government may be evaded and rendered nugatory.

Ordinarily, our safeguard against infectious diseases (assuming their importation) lies, we believe, not in quarantine restrictions, but in the difficulty with which the special poison is diffused, or in the absence of proper conducting media, or the want of the necessities for propagation of the peculiar germ, or fungus, supposed to exist. A season never passes without the yellow fever poison overreaching the supposed barrier of quarantine, and entering some one of our seaport cities. In New York harbor, where, the regulations perhaps, are the most complete, the germ from West India vessels have in innumerable instances reached the shores, contiguous to the quarantine ground, or even the city itself, by diffusion, or by direct transfer by persons or things. Fortunately the poison is too diluted to harm, or to develop many cases of disease ; or else the conducting media (air, earth or water ?) are not at the time suited for its wide diffusion ; or the localizing influences are not such as to favor propagation and a fixed abode. In other words, as we must unscientifically express it, the " epidemic constitution " is absent.

Now, evidently this " epidemic constitution " must differ in different years, even in the same localities. The rule obtains in Southern latitudes (in the yellow fever zone) as well as in Northern regions, that epidemicity is greater or less, one season as contrasted with another. In the West Indies it is a well known fact that epidemic disease does not always occur every year. In some places the disease may be found restricted, while neighboring towns, in close communication, are suffering from wide-spread epidemics. The epidemicity this year, so fearfully illustrated in the Mississippi Valley, *cannot be accounted for by any mere importation of germs at one or a dozen points*. To deny this is to ignore the natural history of this disease as it has been heretofore known the world over.

With port quarantine we have nothing now to do, although the above remarks may indicate in part the views we entertain of its value. Inland-quarantine is now the practical question of the day. In consideration of our extensive and varied lines of intercommunication we may well question the utility or practicability of such a scheme, however conducted. And as regards the abortive and oppressive system which has this season been enacted in many sections of our country, we can find no language strong enough for its condemnation. It has been in many places practiced with a blind faith, and a selfishness inadmissible under any law human or divine.

Can it be claimed that any *cordon sanitaire* has ever kept out cholera or yellow fever when these diseases approach in their epidemic form? Has it ever prevented the extension of yellow fever from our seaport towns into the interior? In years gone by, and before we were as proud as we now are of our scientific knowledge, we never entertained the hope of land quarantine preventing the spread of the disease. And its diffusion, or march into the interior, with rare exceptions, never took place. In recent times the boasted sanitarians have so impressed the people with their importance that much is now expected. Hence inconveniences, privations and sufferings have followed in a most alarming degree, the futile attempt to carry out a supposed principle in hygienic law. Upon a *mere assumption* of the knowledge of the laws of a disease (a knowledge possessed as we said above no more now than it was a hundred years ago) the most arbitrary regulations have been attempted. People flying from a stricken city have been driven back to die. Refugees from a pestilence have been hunted down, and, upon the *possibility* of their introducing disease, (after they had already been the carriers of the poison if such thing were possible) have been charitably shipped to the nearest sister city, who in turn was expected to protect herself. This selfish, arbitrary and unreasonable action was practised by cities hundreds of miles away from the infected regions, and in Northern as well as Southern latitudes. The law of self-preservation, as interpreted in these times, contained no provision for a brother's welfare. We regret to say that in but few instances has even a protest against this rule of conduct gone forth from the profession. The people naturally clung to their superstitions. They possessed but small capability of distinguishing between a

real and an imaginary danger. They were without that enlightenment which should have reached them through the profession, and they were ready to reject the lessons of facts. Thus it was that the futile scheme most generally consisted in the attempted exclusion of *persons*. While this action for the most part pertained to municipalities, or improperly constituted health boards, it at times received the sanction and support of regular health officers in good repute.

After the passage of the resolutions we had the honor to present to the Medical Society of South Carolina, on the 2d of September, there appeared in the New York *Medical Record*, of September 12 h, an admirable letter upon Inland Quarantine, from Dr. J. M. Woodworth, Surgeon-General of the United States Marine Hospital Service. We are pleased to see that this high authority agrees with us so far as to express the belief that "*absolute quarantine by land is impracticable.*" The poison is considered to be transported by *things* and not by *persons*, apart from their clothing. A "simplified" scheme is then suggested; but even this Dr. Woodworth thinks could only be carried out in the event of power resting in a central head, and the authorities of all the cities and towns of the several States thinking and acting alike. Dr. W. concludes that the millenium will have come when this concert of action is obtained. We agree with him thoroughly in this view.

- It may be well for us, however, to consider in brief the probable workings of this simplified scheme, to strengthen our view as to the *impracticability of any kind of inland quarantine*. The plan of Dr. Woodworth is in some respects the most tangible that has been suggested. It contemplates a camp, some miles outside of an infected city, for the temporary residence of unacclimated residents. Also an intermediate station, where clothing and other effects of the fleeing people would be thoroughly disinfected before being allowed to pass to the camp. The refugees, once at the camp, it is presumed will be free to depart elsewhere after a certain detention.

It will be perceived that the healthfulness of the camp is made to depend upon the successful disinfection of the clothing and other effects of the fleeing people. Now, has science arrived at that perfection which enables her to insure the value of any means of disinfection yet practiced? Perhaps cold and heat are the only re-

liable means, and we scarcely see how these agents can be applied practically under the proposed plan. We would have to use them too, in many instances, with the imminent risk of entirely destroying the effects. Under such an attempt, however, we would have to construct ice houses, ovens, and apparatuses for boiling, or steaming, upon an immense scale. It is well known that even in the laboratory of the chemist both heat and cold will often fail to destroy infusorial life. How uncertain then the operation of these agents applied extemporaneously and by untrained hands! Let there occur but one failure to disinfect, and the refugee camp receives disease, and a new focus of epidemicity starts from the introduced germs. This would necessitate a second fleeing of the people, the establishment of a new camp, and another intermediate station in which to try again the process of disinfection.

Again, we are really ignorant as to the kind of articles most likely to carry the supposed germs. We assume that these germs adhere best to woolen goods and bedding, or are ensconced in trunks. For some articles, disinfecting solutions or gases might be suggested, and at times these could no doubt be used successfully. But here again is uncertainty. Look once more at the laboratory experiments with chlorine, carbolic acid, quinine, sulphur, and turpentine. With the most careful manipulation, by the best scientists, bacteria or infusorial life of any kind, exposed to the above named germicides, while isolated in closed vessels, will survive an astonishing length of time. Would not the chances for life of the yellow fever germ or fungus be infinitely better at the proposed disinfecting station than that of the infusoria in the chemical laboratory?

But the very change of clothing on the part of the refugee may involve serious risk. The new clothing must be provided in advance, unless the disinfected articles are to be resumed. What guarantee have we that clothing kept at the station is not infected by contact with *things* constantly accompanying the persons from infected cities, or that it will not soon become polluted by juxtaposition with the garments that the party takes off when about effecting an exchange? The very articles disinfected are liable to become again contaminated before the departure of the refugee. Surely there is no scientific accuracy here! If the poison is a portable one, and capable of diffusion and multiplication to the

extent supposed by many, this simplified scheme must prove a failure. Things innumerable will escape our scrutiny and be the bearers of the poison. While we confidently give freedom of departure to *persons*, their very hair may carry the seeds of disease. It then becomes a reasonable demand that every one at the station be shaven and shorn.

Let us look yet farther. There are serious risks to be encountered upon all lines of travel, outside of the camp, which connect with neighboring towns. The refugee camp must receive its supplies from the infected city, or from neighboring healthy communities. If from the former, there must be admitted *things* that cannot be subjected to disinfection—things that must come in bulk, and with surrounding air and the necessary packing. If an epidemic then is not induced it will not be because of the want of infectious material.

Again, the refugees at the camp are to be only temporarily excluded from the lines of travel. Indeed the presumption of their health will allow of their early entrance into adjoining or distant towns. There are intermediate points between the healthy and unhealthy communities, under all the systems of land quarantine that have been enacted, at which persons and things from the opposite points must commingle. There is then necessarily danger to all unacclimated persons from the healthy side. The very quarantine officers, the conductors and other employees of rail road trains, the officers and hands upon boats, are directly exposed to infection. They must needs very often come in contact with polluted air, or infected clothing, and thus they are in daily jeopardy of contracting disease. Do the ignorant and panic stricken municipalities of every small town who arrogate to themselves authority to stop and drive back every man woman and child running for life, think of this danger? How often do they verify the scriptural saying that "he who would save his life shall lose it!"

The remarks just made with reference to the commingling of healthy with unhealthy communities applies to a certain extent to the refugee camp that we have been considering as well as to the originally infected city. If we are correct in our view as to the probability of the camp becoming infected from the city, of course, the passage of persons and things from the camp along the lines of

travel, implies a definite amount of risk to the neighboring communities, and the likelihood of the creation of new foci of disease.

Our line of thought has thus proceeded upon the presumption that the disease is transported by *things* only; but if we admit its transference by *persons* as well, this whole scheme of "simplified land quarantine" must be the more certainly regarded as delusive and impractical.

We have no greater faith in any other system that man may attempt in the present condition of civilization and science. The lessons so far derived from the present epidemic strengthen us in this conviction. It is true there are facts yet to be gleaned, and deductions to be drawn. The experience has been the most valuable ever offered to reason from. We trust it may abound to our good. There are yet so many open questions that we shall not obtrude upon scientific investigations by farther urging our convictions.

In conclusion, there is one practical and vital matter that we, as a profession, should strive to insist upon. If land quarantine is to be in any way practiced in the future, it should be under the guidance of properly organized bodies, who are familiar with all the teachings of modern science and professional experience. They should be prepared to act in accordance simply with known facts. The people should be enlightened and made to know that it is to their interest to submit to those entitled by education and experience to lead them. The spirit in the profession to encourage the fears and superstitions of the vulgar should be frowned down. The time for action is now, when the ravages of the pestilence have ceased, but while these are still fresh in the memory of all. Now it is that every State Legislature should be asked to establish a health board with most plenary powers, and the profession use their powerful influence in having these properly constituted. There should come strength, too, by union and harmonious action. Perfect agreement upon all points connected with infectious diseases cannot be expected, but there should be assured at least that true spirit of coöperation which will enable us to settle upon the most practical way of meeting the requirements of this question, and of at least depriving it of the inhumanity which has, this year, been its saddest as well as its most decisive result.

COUNTRY CLINQUES.

I.—SUPRA-PUBIC LITHOTOMY.

BY A NORTH CAROLINA PHYSICIAN.

In August, 1877, I discovered a stone in the bladder of Henry Gibson, (col.,) æt. 7 years. He had suffered from this cause for nearly six years;—in consequence, his general health was much shattered, and his appearance betokened great emaciation and debility. The urine was alkaline with an ammoniacal odor, often containing blood in large quantity, and looked milky from the admixture of mucus and pus.

My intention was to operate by the perineal method, but the director in my possession proving too large for his urethra, I extracted the stone by the supra-pubic section. The calculus, as large as a hickory nut, was extremely rough, and weighed about two ozs. Patient recovered perfectly in sixteen days.

In December, 1877, I performed a like operation upon Alfred Hines, (white) æt. 18 years. This patient had suffered with symptoms of stone for fifteen years, and was in a more unpromising state of health than the other. Albumen was present in large quantity in the alkaline urine, besides mucus, pus and blood. Digestion was feeble, emaciation extreme, and auscultation revealed the presence of marked valvular disease on both sides of the heart. Fourteen days after the operation, patient returned to his home, twelve miles distant, and on the eighteenth day the wound was closed. The calculus was as large as an English walnut, with a rough and jagged surface.

The procedure in both cases, was as follows: After shaving the parts, complete anæsthesia was induced by the inhalation of ether. The bladder having been moderately distended with warm water, the catheter was exchanged for a Thompson's sound which accurately filled the urethra. (The catheter would have answered the same purpose, if I had stopped its canal.) The sound was pushed upwards, until its point could be felt an inch or more above the symphysis pubis. In this position it served as a gauge for the depth of the external incision. This was made about two inches long, in the median line, the tissues being divided until the fascia

below the recti muscles was exposed. By means of the sound this was now made taught, and cautiously punctured close to the symphysis, until first a director, and then a finger could be freely passed behind the pubic bones. The sound being now partially withdrawn, the fascia was divided upon the finger to the extent of the external incision. By retracting the sides of the wound, the bladder was exposed, pierced with a strong tenaculum at its highest convexity, drawn to the upper end of the incision, and held up by an assistant. The sound having been withdrawn, the bladder drained of its contents, was carefully incised in a line with the external wound, and just above the pubes, to an extent sufficient to admit the finger. The location and size of the stone being thus ascertained, it was grasped with the ordinary bullet forceps and cautiously withdrawn through the incision, which required slight enlargement in the second case. No other stone being found, the bladder was several times washed out with cold water until bleeding ceased, after which a compress moistened with laudanum and whiskey was laid upon the wound, and the patient put to bed.

On the score of treatment, little need be said. An attempt to pass the catheter in the first case, gave rise to such pain, that I did not repeat in either case, and the urine was allowed to take its own course. The wound was frequently washed, and both it and the adjoining parts as often anointed with vaseline. The bladder was several times injected with warm water through the wound, and large accumulations of urine prevented by turning the patient upon his side and even upon the belly every four or five hours, until urine began to pass by the natural channel. Pus as well as urine sometimes collected between the bladder and abdominal walls, but was readily expelled by gentle pressure. Reaction was not excessive, and the fever speedily yielded to quinia. Morphia was used when necessary to control pain, the bowels kept open, and nourishment insisted upon from the beginning.

My first patient lay upon the floor with only a straw sack under him—the surroundings of the other were not much more favorable.

Surely an operation so simple in its execution, and so satisfactory in its results, does not need an apology for its adoption. And yet the number of cases in which supra-pubic lithotomy has been *primarily* performed in this country, could almost be counted

upon the fingers of one hand. No surgical text-book of the present day, whether of American or English origin, has anything to say in its favor, except as a last resort, in cases where the stone is too large to be removed by the perineal method, and some authors even recommend division of the perineum into the rectum, rather than endorse the supra-pubic section. Some of the German surgeons are speaking and writing in its favor, and recently Dr. C. W. Dulles, in a series of articles (*vide Amer. Jour. of Med. Sciences*, July, 1875, and April, 1878, and *N. Y. Journal of Medicine*, September, 1878) has made a gallant and masterly attempt to rescue this valuable procedure from its undeserved oblivion. By statistics and descriptions of operations collected from all sources, he disposes of the specious arguments which have heretofore prevailed against it, and establishes its claims, at least, to a favorable consideration, if not to general adoption. Were I to operate again by this method,—and I propose to do so, at the first opportunity—I should adopt some of the admirable suggestions contained in Dr. Dulles' papers; and to those interested in the subject, I strongly commend their careful perusal.

In opening the bladder by the supra-pubic section, no blood-vessels are divided—no important structures are involved or even jeopardized—no thrust is made in the dark. The patient cannot die of hemorrhage,—the most ordinary precaution, i. e., merely pushing it out of the way, will prevent the wounding of the peritoneum,—the absence of large blood-vessels and lymphatics renders septicæmia highly improbable;—so that there is really only one contingency to dread, viz: the extravasation and burrowing of urine. The danger of this must have been greatly overrated. Methodical change of position, and gentle pressure will prevent accumulation, and the force of gravity alone without the pressure afforded by such accumulation, could hardly overcome the resistance of the inflammatory action, which the presence of so acrid a material as urine, would speedily excite. Of course the external wound must not be allowed to close until the incision in the bladder is healed. Then too, extravasation might be entirely prevented by a careful stitching together of the wound in the bladder.

To open the bladder by way of the perineum requires great skill, or in the absence of this, great boldness. The circumscribed

space, the proximity of the rectum and internal pudic artery, the division of important muscles and blood-vessels, the opening of the deep pelvic fascia, the long wound in the urethra, the lacerating and bruising of the prostate gland, the cutting through the most vascular and sensitive portion of the bladder,—each and all present grave difficulties to surmount, and give rise to results and complications unpleasant to contemplate. Hæmorrhage, peritonitis, infiltration of urine, septicæmia, diffuse areolar inflammation, perineal and recto-vesical fistula, incontinence of urine, and impotency, are accidents which have frequently occurred in the practice of even the most accomplished lithotomists.

Perineal lithotomy is the fashion at the present day, and I am far from presuming to hope that this fashion will shortly be changed. This appeal for a simpler method of operation is not addressed to the great professors and teachers of surgery. Surrounded by abundant clinical material and enjoying unlimited facilities for dissection, operations of the most difficult and delicate character, become to them matters of slight consideration. They have themselves to blame, if they are bunglers in their chosen branch of the healing art.

It is rather to those of the profession, who, like myself, are surgeons as much from necessity as from choice, and wholly dependent upon books and plates for the refreshing of our anatomical knowledge, that supra-pubic lithotomy asserts its claims. In the absence of clinics, dissections, operations and demonstrations upon the cadaver, instrument-makers at command, unlimited and skilled assistants, hospital discipline and surroundings for our patients ;—it behooves us to cultivate in our surgical essays, safety with simplicity rather than brilliancy. Supra-pubic lithotomy requires no complicated apparatus, no skilled assistants. The way is plain, and—best adjunct to successful surgery—the light of day accompanies every step of the operation. A bungler can hardly fail to perform successfully the supra-pubic section ;—the most skillful operators have been and may be baffled by the dangers and difficulties of the perineal operation.

NOTE ON THE "PER RECTUM" ADMINISTRATION OF HYDRATE OF CHLORAL IN PUERPERAL CONVULSIONS.

By CHARLES DUFFY, Jr., M. D., Newbern, N. C.
President of the Medical Society of North Carolina.

The first notice of the administration of hydrate of chloral by enema which has come to my knowledge was taken from the *Gazette des Hôpitaux*, February 22, 1873, and since that time—more particularly within the last two or three years—occasional reports of cases of eclampsia, contain notices of similar administration; but I am not aware of any writer giving due prominence to the method or claiming better results from this, than from other methods of using it.

Although I had prescribed chloral by this method several times before, I was not particularly impressed with its value till the 28th day of October, 1876, when I was called to treat a case of convulsions whose history is so unique I deem a detail of its more important features admissible here. The patient, a stout robust unmarried white woman, nineteen years old, was stricken in the midst of apparent perfect health, with a violent convulsion twenty-four hours before I saw her; she had had chills three months before and "missed her menses," but had had no sickness in consequence save a little dizziness and mania at times. Up to the time of my visit, it was estimated she had had thirty or forty convulsions and had not had a moment's consciousness since first seizure. Her swollen and lacerated tongue and suffused eyes gave her the appearance usually observed in cases of the gravest puerperal eclampsia. She was bled thirty-two ounces, and had $\frac{1}{4}$ grain of morphia hypodermically.

This seemed to diminish somewhat her coma and lessen her stertorous breathing and made an interval of an hour between her convulsions. An attempt was made to administer chloral per oram, but she could not be made to swallow. In the meantime a syringe was procured and forty grains were administered per rectum. In less than one hour she was sleeping naturally.

She had no more convulsions but continued unconscious and unable to swallow for the next three days, during which time chloral was injected as occasion required two or three times a day.

On the fifth day of her attack she aborted, after which she soon regained her consciousness and made a good recovery.

The promptness with which the remedy used as indicated above, seemed to arrest a threatened explosion, and its power of holding in abeyance the disease, has led me to adopt the same method in a number of cases on subsequent occasions, and I have in no instance been disappointed by its results.

Speculations as to the manner of its action may be useless, but granting that the uterus (receiving its nerve supply from the renal plexus and inferior mesenteric, from the hypogastric plexus, and from the lumbar ganglia of the great sympathetic) is the point of departure of the irritation, it is probable that the drug, when placed in almost immediate contact with this organ, exerts a local action, independent of its systemic effect, which hitherto has been overlooked in the computation of its value as a remedy in puerperal convulsions.

However this may be, the certainty and facility as well as the efficacy with which chloral may be administered by the rectum, when compared with the tedious uncertain and difficult process of giving it by the mouth to a patient comatose or in convulsions, leaves no doubt as to the method to be preferred.

SELECTED PAPERS.

THE CAUSES AND COURSE OF DISEASES OF THE HEART.

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M. D., M. R. C. P.

Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, and to the West London Hospital.

VALVULITIS.

[*Concluded*].

Not only is absolute rest essential ; but the lowering of vascular activity by therapeutic agents is very desirable. To attain this end chloral is the drug which first suggests itself. It lowers cardiac

activity, it lessens the blood-pressure in the arteries, and consequently it lessens the strain upon the cardiac valves. Not only this, but as a general sedative it would act beneficially upon the nervous system ; keeping the patient quiet, controlling the inclination to get up, and relieving the restlessness engendered by constrained confinement to bed. Also bland food, chiefly of a non-nitrogenised character, should be prescribed. Parkes, of Netley, has shown us how the blood-pressure in the arteries falls on a non-nitrogenized dietary ; and such a dietary will aid our other efforts to lessen the strain on the inflamed valves. By such a line of treatment we can control a process by limiting its spread ; when we are powerless to oppose its later actions. But at present we seem rather to stand with folded hands, and, like an Oriental, to utter *Kismet* while the time is rapidly passing by when we can be of avail to our patients ; and then, when the mischief is done, becoming acutely conscious of the evil wrought, and busying ourselves to provide palliative measures to aid the natural efforts towards muscular compensatory growth to supplement crippled valves. Would it not reflect more credit on our reasoning powers if we tried to utilize our information ; and take the only effective measures at our disposal to limit the mischief going on in the valves in the first place ?

Once the mutilation of the mitral valve is accomplished, then the prognosis of each case rests upon the resisting powers of the organism, and upon the nutritive powers especially in the muscular walls of the right ventricle. Again, the question of the rapidity with which the valve lesion is developed comes in as the leading factor in prognosis. Where great damage has been done to the mitral valve a sufficient compensatory growth is attained with great difficulty, and usually only in a partial manner ; and the case goes rapidly down-hill. But where the lesion is less, a fairly efficient muscular compensatory growth is established and the new equilibrium may last for years. In the more slowly progressing sclerotic or contracting endocarditis, otherwise chronic valvulitis, the morbid changes in the mitral valve are met by a conservative thickening of the walls of the right ventricle ; which in favorable cases enables the circulation to be maintained in fair activity for a considerable number of years. There exists as yet no evidence as to the effect of a second attack of endocarditis upon an already in-

jured mitral valve. From my own experience I can say nothing more than that so far I have not seen any ill effects from a second, or even more attacks of acute rheumatism upon mitral valves once inflamed.

The consequences of a mitral lesion upon the right heart tell us in distinct language the effect of sustained strain upon the cardiac apparatus. Primary right-side disease is rare, and is usually the result of an obstructed pulmonic circulation : but when left-side disease involving the mitral valve is once established, then right-side disease is quite common. As the right-side is the one liable to disease in intra-uterine life when it has to sustain the stress of the systemic circulation ; so, again, it becomes liable to disease when once more subjected to the strain of the general circulation from a lesion of the mitral valve. The right ventricle becomes enlarged, while its wall thickens ; for hypertrophy of the walls without increase in the size of the ventricle probably never occurs in the right side of the heart. The new strain is felt in the tricuspid valve which commonly becomes the seat of valvulitis secondary to mitral deformity. Then the crippled valves, with probably a dilated ostium, permit the blood to flow backwards into the great veins on each contraction of the right ventricle. Tricuspid regurgitation causes wide spread mischief. The jugular veins throb, the blood coming from the brain meets with obstruction to its onward flow ; the valveless portal circulation, is specially engorged, the liver is enlarged, and pulsates with the impact of the regurgitant wave. The circulation in the kidneys is obstructed, and albumen appears in the urine. The congestion of the intestinal vessels leads to serous diarrhœa or peritoneal dropsy. The gastric vessels are disturbed, and from the venous congestion comes the catarrhal condition which creates the sensation of fulness so much complained of. There is increased secretion from the bronchial veins, constituting a bronchial catarrh ; effusions take place from the pleural and pericardial surfaces ; the thoracic space is thus impaired, and, not rarely, effusions of blood take place into the tissue of the lungs, the infarcti Laennecii ; less commonly there is pulmonary hæmorrhage. Gradually the respiration is enfeebled, and finally ceases ; the diseased heart often still pulsating—the cause of death, and yet not itself the first to die. The dropsy of the lower extrem-

ities, usually the most conspicuous objective sign, exercises but little real influence over the fatal results ; though it has its value, as by its temporary disappearance, and by its fluctuations when reëstablished, we are furnished with the readiest information as to the progress of the case. The venous congestion of the various viscera leads to a growth of connective tissue in them ; the liver is enlarged, and of abnormally firm consistence ; the spleen cuts almost like a beef-steak ; the kidneys are swollen, and harder than natural ; the lungs are indurated ; and the brain contains a larger amount of connective-tissue than is its wont. The morbid changes wrought by the “back-working” from the mutilated mitral valve vary in different cases. From my experience of the Pathological Institute of Vienna, I should say hæmorrhage into the lung is more common in the rapidly fatal cases seen in the young ; whilst slow growth of interstitial tissue belongs rather to the more chronic cases and to more advanced life.

The preventive treatment of mitral valvulitis has been already spoken of ; it is now time to say something of the palliative treatment, for by this the progress of the case as to time may often be greatly modified. In the first place, here, as in every other form of cardiac disease, rest, as far as is attainable, is essential. No arduous occupation is compatible with life. Light work only, where better conditions are not attainable, may be unavoidable where the patient must toil for a livelihood ; and it is less injurious where prolonged but involving little exertion, than where shorter but more arduous. At intervals, a few weeks in bed often are of the greatest value ; and set the patient up, as it is termed, for a long time subsequently. Sooner or later the patient is too ill for any labor, and is compelled to desist and take to bed.

The prognosis of mitral disease varies very much with the condition of life of the patient. The affluent have much better chances of a prolonged existence than have the toilers ; though sometimes these latter wear on in a very surprising manner. I know a Westmoreland peasant who had his mitral valve severely injured by an attack of rheumatic fever, for which my late father attended him twenty-five years ago. I attended him with severe hæmoptysis thirteen years ago. With occasional trouble at intervals, he nevertheless maintains a very fair general condition. He works steadily

at light agricultural work yet, though over sixty-six years of age. He writes me as follows, his letter being received March 27 :—"I am thankful to inform you that my general health is better these last two years than for some years previous. It is over two years since I discharged blood from the lungs. I have frequent attacks of palpitation, followed by a feeling of suffocation, continuing from ten minutes to half an hour, passing off and leaving nothing disagreeable. I shall be sixty-six years of age on May 22, and if I had steam to propel the old machinery, I feel able to hold my own against all comers."

Treatment, too, exercises no slight influence over the progress of mitral mischief. The nutritive powers must be maintained; light, easily assimilable food, not much alcohol, little tea and coffee, and a good deal of milk, should form the dietary. Late suppers are bad, and especially when heavy, often causing a nocturnal dyspnoea. The clothing should be warm but not too heavy; stout undershirts are the best things, better than heavy overcoats. As to medicines, iron steadily persisted in is indispensable, except when the condition of the *primæ viæ* proscribes its use, and indicates vegetable bitters with acids or with bismuth. Cod-liver oil is perhaps less useful in heart cases than in chronic affections of the lungs. Opiates and sedatives are fraught with risks; and are worthless, indeed harmful, in the cough of pulmonary congestion from heart failure. Tonics are useful, and strychnia, from its effects upon the cardiac ganglia, and still more upon the respiratory centre, is often most useful; and I have seen œdema of the lower extremities fall steadily under its exhibition alone. But of all agents we know, digitalis is the most potent and effective. Its administration may be continued for years without fear of its cumulative action, if my personal experience may be trusted. It is well to give it persistently, in doses from half a grain to a grain of the powdered leaves; or of the infusion, from half a drachm to a drachm; or of the tincture from five to twenty drops three times daily. Where there is fair hypertrophy, the dose may be small; where dilatation is marked, larger doses must be exhibited. In all stages of mitral disease it is useful by common consent. As the tricuspid leaks, so its effects becomes less pronounced. When there is much venous engorgement it is well to relieve the portal circulation by brisk purgation;

and this does not lead to collapse if the patient be put on digitalis beforehand for a few days. The use of the steam-bath to promote diaphoresis will aid the good effects of the purgation. A patient was in this hospital a year ago with extensive dropsy of the legs and arms, and in a few weeks was discharged, and has since attended as an out-patient. Belladonna is also useful, especially in those very rare cases where digitalis disagrees. As to tapping the legs, it seems to do most good where the dropsy is partly renal as well as cardiac. In pure cardiac dropsy, in my experience, it does much harm, and little, if any good ; rendering the bed a soppy mass unless Dr. Southy's drainage tubes be used. The management of the downward course of mitral disease will demonstrate the practitioner's acumen and his acquaintance with professional resorts very distinctly. To meet each new difficulty as it arises to husband the patient's powers—indeed, to fight the case all along the line assiduously and persistingly—will bring out all our best therapeutic efforts, and test our knowledge. And often a wonderful fight can be maintained, and a sturdy resistance offered to a downward career, the end of which is certain.

While such is the usual end of mitral disease, occasionally a more fortunate issue is attained. One case, a youth, tells of a practical cure being achieved. He had mitral regurgitation, with an enlarged left ventricle. After the persistent use of iron and digitalis, the murmur has disappeared for a long time ; and there are no subjective evidences of a lesion. He is an active fellow and a good swimmer. Here one is led to suppose that the damage done to the mitral flaps was just so much and no more than that when the ventricle and its ostium were enlarged, they were insufficient to close the orifice, and so permitted of regurgitation. Now that the ventricle and its ostium are presumably restored to their normal dimensions, the mitral vela become once more competent.—*Medical Times and Gazette*.

THE COMMITTEE OF THE BOARD OF HEALTH.—There was a meeting in Raleigh of the Committee of the Board of Health, on the 16th October. A resolution was passed that the President of the Board of Health shall make a report to the Legislature through the Governor, and the Committee asks to be aided by suggestions from the profession of the State.

CONCERNING THE INFLUENCE OF PERSPIRATION ON THE FEBRILE TEMPERATURE.

By SIDNEY RINGER, M. D.,

Professor of Medicine at University College, Cavendish W.

I am induced to publish these experiments, as they throw some light on the cause of the morbid elevation of the temperature in fever. This preternatural heat of the body has been accounted for in different ways. Some ascribe it to the dry skin in fever, whereby less heat is lost by evaporation; whilst the production of heat is maintained, the excess accumulates in the body and raises its temperature; but this accumulation of heat, as I shall shortly show, plays a very insignificant part in the generation of fever.

According to another, and, as I believe, the correct view, by far the greater part of the preternatural heat of fever is due to increased formation of heat by increased combustion of the tissues, especially the nitrogenous tissues. During fever the quantity of urea is largely increased, and this is generally considered to depend on general combustion of the nitrogenous tissues. Some have demurred to this conclusion, maintaining that the increase of urea is due to the retrograde metamorphosis of morbid products formed by the disease, as the exudation into the lungs of pneumonia. This explanation, however, fails altogether to explain the increase of urea in an attack of ague, where no morbid products are formed. Some years ago I showed that during a paroxysm of ague the urea is increased in proportion to the height and duration of the fever, so that given the height of the fever we can approximately calculate the increase in the urea; and, *vice versa*, given the increase of urea, we can ascertain the height of fever. The increase of the urea begins directly the fever begins, and declines with its decline.

This increase in the urea must be ascribed to increased combustion of nitrogenous tissue; and as the increase of urea is in proportion to the severity of the fever, it is fair to conclude that this increased combustion causes the fever.

A case of rheumatic fever with high temperature but with freely perspiring skin conclusively proves that fever is not simply due to accumulation of heat through loss of evaporation from a dry skin. In other febrile diseases, too, as in typhoid fever, especially where

there is considerable exhaustion, the skin may be occasionally moist, and even soaked, whilst the temperature is very high.

I will now adduce additional evidence to show how little share the dry skin plays in the production of the febrile temperature. Two patients were under my care with ague. I determined to excite profuse perspiration before, or just before, the commencement of the febrile paroxysm, and to watch what effect this free perspiration might have on the high temperature.

The first patient suffered from quotidian ague, and his temperature in an untreated paroxysm to 105° and 106° F. Just before the onset of an attack, I gave him half a grain of pilocarpine, which in twenty minutes produced copious perspiration; yet in spite of this, the temperature rose six degrees, to 104.4° , and the fit lasted as long as on previous days, the temperature falling short of the attack in the previous day by about a degree. As in ague, the untreated fits often differ to a greater degree than this, it is doubtful if even this slight diminution was due to the jaborandi. I may mention that the sweating produced by the jaborandi had very little influence on the shivering, and blueness of the lips, nose and extremities.

The next patient suffered from irregular tertian fever caught in Florida. In an untreated attack, on August 1st, his temperature rose to 104.8° . On Aug. 4th the rigor began at 3.20, his temperature at that time standing at 101° F., conforming to the rule with ague, that the temperature rises one or two degrees before the rigor begins. Five minutes after the beginning of the rigor, Mr. Neale, my resident assistant, administered hypodermically a quarter of a grain of pilocarpine. In a quarter of an hour perspiration began, the temperature standing at this time at 102.6° . The perspiration became profuse, and yet at 4.30, fifty minutes after the commencement of free perspiration, the temperature stood at 105.5° , and continued above 105 till 5.30 P. M., when the fever began to decline, and the temperature became normal between 1 and 3 A. M. on the following morning, the fit lasting more than ten hours. On Aug. 7th he had a fit which was untreated. On Aug. 10th he had another attack. At 3.20 his temperature was 101.8° . At 3.30 Mr. Neale gave him a hypodermic injection containing half a grain of pilocarpine. At 3.45 he was perspiring very freely, and his temperature

marked 102.1°. At 5.30 the temperature was 105°, and subsequently rose to 105.2°. It remained at or above 105°, till 8 P. M., and then fell, becoming normal at 4 the following morning; the fit, therefore, lasted over twelve hours. On August 13th he had another attack. At 5 P. M., his temperature was 101°. At 5.30 half a grain of pilocarpine was administered hypodermically. At 5.45 he was sweating, and his temperature then marked 103°. At 7.15 his temperature stood at 105.4°, and so remained till 8 P. M., and after this time it fell, becoming normal between 3 and 5 the following morning. In this case the attack lasted more than ten hours.

In these experiments, then, the temperature in an untreated attack rose to 104.8°. In the three fits treated with pilocarpine, which produced copious perspiration, the temperature reached respectively 105.6°, 105.2°, and 105.4°, the fits lasting, respectively, ten, twelve, and ten hours. We may therefore fairly conclude that the free perspiration had a very insignificant influence on the febrile temperature, and the increased heat cannot be explained by its accumulation owing to a dry skin, but must be due to increased production of heat from increased combustion.

In his interesting and suggestive lectures on Cardiac Depressants, Dr. Fothergill explains the effect of aconite and tartar emetic on febrile temperature by their changing the dry to a moist perspiring skin, and so increasing the loss of body heat by increasing radiation and evaporation. As I have already said, by making a dry skin moist we must of course abstract a certain amount of heat by evaporation, and to this extent cool the patient; but the experiments given in this paper show, I think, how insignificant a part the loss of heat, induced in this way, plays in causing that great fall of temperature so often produced by aconite or tartar emetic. Other reasons may be adduced in support of the same conclusion.

1. Whenever aconite promotes perspiration, a proportionate reduction of temperature ought to take place in all diseases; but whilst, in many cases, as in tonsillitis, &c., the fall of temperature is considerable, in other forms of fever, though the perspiration may be very free, yet scarcely any, or even no fall of temperature takes place; for instance, in many cases of erysipelas, pneumonia, pleurisy, and especially in the specific fevers, the fever continues unchecked.

2. We, not uncommonly, find that aconite quickly reduces temperature without promoting sweating, especially with children, in whom this drug in many instances fails to produce it.

3. Sometimes we see cases like the following: In typhoid or scarlet fever a patient with a hot dry skin, to whom we give aconite, becomes in a few hours freely bathed with perspiration, which continues several days, and then, in spite of the drug, the skin again becomes quite dry. Now in a case like this we find that the temperature undergoes no change. It remains as high during the sweating as before giving aconite, and does not rise on the cessation of the perspiration.

4. Some years ago, in conjunction with Mr. P. Gould, in order to test the influence of perspiration on the temperature, we three times performed the following experiment:—We placed a fever patient in a hot-air bath, with the exception of the head and face. When free perspiration came on the bath was removed and the patient covered lightly with clothes, and in this state he sweated for some hours afterwards. Whilst in the hot-air bath his temperature did not rise, nor did it fall after the bath, notwithstanding the free perspiration and light clothing. If it be objected that the clothing prevented evaporation, and the consequent reduction of temperature, I may reply that these are the identical conditions under which aconite in so many instances causes so marked a fall of temperature.—*London Lancet*.

ON THE ACTION OF TONICS.

There can be no doubt that the word “tonic” conveys a certain meaning both to doctor and patient, definite enough in one way, but very vague in another. Both understand that the tonic will increase the strength, and remove the weariness and languor, but how it does so probably neither has attempted to find out. On turning to Pareira we find that tonics are defined as agents which increase the tone of the system; but if we inquire further what is meant by tone, and what by the system, it will not be quite so easy

to give a definite answer. Perhaps the easiest way of doing this is to take the want of tone, as we term it, for which tonics are administered, and to analyze the various symptoms which we find. First of all, then, there is a feeling of languor and disinclination to exertion, mental or bodily. The person may be roused by some excitement to make considerable exertions, but these are succeeded by a greater than usual feeling of fatigue; the appetite is generally diminished, the pulse is softer and more compressible than usual. Not unfrequently, too, there is less power than usual to resist the attack of disease. Want of tone, then, assists in diminishing functional activity of the muscular, nervous, circulatory, and digestive systems, and a tonic is something which will increase this activity. Some tonics, however, act more on one system than another; and so we have vascular tonics, nervous tonics, and digestive tonics as well as general tonics which seem to influence all the systems together.

The first class of tonics, gastric or digestive tonics, enable the patient to take more food, and with a greater relish. The most typical examples of this class are the so-called *bitter tonics*, such as colombo, quassia, gentian, cascarilla, and hops, either alone or in the form of bitter beer. In the mouth, these drugs produce a transient bitter taste, and increase the secretion of saliva. Thus they will tend to aid the digestion of starchy matters. In the stomach they cause a slight irritation, and the stomach not having the same power of discriminating sensations that the mouth has, feels this, not as bitterness, but as appetite; unless the dose of the bitter should be too great, or too concentrated, and then it is felt as nausea, and is followed by vomiting. The appetite, however, which small doses excite, induces the patient to take more food, and to take it with greater relish. The increased relish is not to be disregarded. It would not be the same thing if the patient were simply to cram down, against his inclination, the same amount of food which he takes after his appetite has been excited by a tonic. We have not yet succeeded by pharmacological experiment in ascertaining precisely the effect of different emotions upon the stomach, but there can be little doubt that the pleasant feeling resulting from gratified appetite aids digestion, while that of disgust and satiety interferes with it.

Experiment has not shown that bitters increase the secretion of gastric juice in the same way that they do that of saliva, but they have an important action in lessening the tendency to putrefaction in the stomach. It is not impossible that in this way they prevent the formation during digestion of such substances as butyric acid, which is a direct nervous poison, and which, when absorbed into the circulation, would of itself tend to cause weakness and debility. It must not be forgotten that a man may be poisoned by substances formed in his own intestines, as well as by poisons taken into them by the mouth.

We all greatly dread the inhalation of sewer gas into the lungs, but probably very few of us think that noxious gases formed in the stomach and intestines are readily absorbed by the blood, sometimes producing very serious results, and probably in many other cases leading to weakness and depression, the cause of which is never suspected. Experiment has shown that bitters, if they do not increase the secretion of gastric juice, at least tend to diminish secretion of the mucus, and thus diminish, as well as by the antiseptic action just mentioned, the fermentation which mucus is apt to set up. It has been found by Köhler that even simple bitters in large doses will raise the blood-pressure by acting on the vaso-motor centre. It is doubtful whether they do so in the small doses usually administered or not, but there are other remedies—so called vascular tonics—which combine this action to a considerable extent with one upon the stomach.

Thus, infusion of *digitalis* does not greatly increase the secretion of saliva, or produce a feeling of appetite in the stomach. It acts, in its absorption, upon the vaso-motor centre and upon the heart, rendering cardiac pulsations slower, and more powerful by contracting the vessels, and thus making the pulse firmer and less compressible. This improvement in the circulation makes itself felt in every organ of the body. Thus the stomach is relieved of congestion, digests the food more easily, is less liable to secrete mucus, and is much less apt to be distended by flatulence. This is perhaps best marked in cases of mitral disease, where the venous congestion which accompanies such a condition often leads to an accumulation of flatus, sometimes termed by patients heart-wind. The pathology of this condition has not been precisely made out,

but we must not forget that interchange of gases goes on between the blood in the capillaries of the stomach and the gas contained in its cavity in the same way, though to a much less extent, as between the blood in the capillaries of the lung and the air contained in the pulmonary alveoli.

The action of another drug, very different from *digitalis*, namely, *charcoal*, upon flatus of the stomach, is very marked, and is usually ascribed in text-books to the power which the charcoal possesses of absorbing gases. But charcoal only does this when it is dry; it loses its power when moist, and it seems incredible that a teaspoonful of charcoal swallowed after a meal and mixed with the contents of the stomach, including perhaps a pint of beer, in addition to all the gastric juice, should, after being churned up with the food in the stomach, absorb so much gas as to have any effect whatever upon the flatulent distention. It seems much more probable that its action is simply mechanical, and that by the small insoluble particles acting upon the mucous membrane, the circulation through it is so stimulated that the blood, flowing more rapidly through the vessels, absorbs and carries away a part at least of the accumulated gases. In respect, then, of its action upon the circulation in the stomach, charcoal may have some similarity to *digitalis*, but here the similarity ends. Charcoal has no action upon the heart. It cannot restore the balance of the circulation like *digitalis*, and it has none of the general effects upon the heart and vessels produced by the friction in the wet sheet so well described by Dr. Winternitz.

The improved circulation produced by vascular tonics makes itself felt in the liver and intestines as well as in the stomach. The yellow tinge indicating biliary congestion, will disappear from the eye, and hæmorrhoidal engorgement will be lessened or removed. The brain and nervous centres, under the influence of a freer current of blood, act more readily and powerfully, thought comes with less effort, and exertion, both mental and bodily, can be continued for a much longer time, without any sense of fatigue. Two conditions also disappear, which, although apparently contradictory, afflict debilitated persons at the same time. These are drowsiness and sleeplessness. Frequently do we hear debilitated patients complain that they are so heavy for sleep that when sitting

in their chairs or going about their work an irresistible drowsiness comes over them, and they fall asleep in the midst of an unfinished task, but when they lay their heads on the pillow and seek rest the conditions are at once reversed, drowsiness disappears, they toss about from side to side in the vain attempt to fall asleep, and perhaps it is not until they get up and walk about for a little that they are able to effect their purpose. Both of these conditions, apparently so dissimilar, depend upon the atonic condition of the vessels, so that instead of resisting the pressure of blood within them, they yield before it. In consequence of this the blood gravitates, while they are in an upright position, to the vessels of the abdomen and legs, leaving the brain anæmic and thus inducing sleep. On the other hand, when the horizontal position of the patients allows the blood to flow more easily to the head, the carotids and their branches, instead of contracting and keeping back the blood, allow it to circulate rapidly through the brain, and thus the unfortunate patient, unable to think at the time when he wishes to, is plagued by a rapid and incessant flow of ideas at the very moment when he least desires them. By giving digitalis so as to excite the vaso-motor centre, the vessels are made to contract moderately, they no longer yield to the pressure of the blood, and thus the blood is prevented from gravitating to the abdomen and lower limbs, and a free circulation through the brain enables it to discharge its functions satisfactorily, notwithstanding the force of gravity which in the upright position always tends to make it anæmic. Again, when the patient retires to rest, the blood which tends in a horizontal posture to rush towards the brain, is checked in its course by the carotids and their branches, which under the influence of the vaso-motor centre, stimulated by the vascular tonic, contract and regulate the cerebral circulation so as to allow only sufficient blood to pass to the brain for the purpose of nutrition, but not enough for functional activity.

It seems highly probable that a similar action is exerted upon the vessels of the spinal cord, and that thus the patient feels increased vascular power and is equal to more prolonged exertion.*

*For a fuller explanation of the *modus operandi* of contraction of vessels in the cord in increasing muscular strength, we may refer to a paper on the curative effects of mild and continued counter-irritation of the back in cases of general nervous debility and in certain cases of spinal irritation, by Arthur Gamgee, M. D., F. R. S., in the *Practitioner*, vol. xviii., p. 113.

But this is not all, for the subcutaneous tissue, and probably also the muscles themselves, are also benefitted by the improved circulation. In the case of the subcutaneous tissue, the improvement is visible and palpable, as it is also in the muscles, though perhaps rather less plainly. In persons suffering from debility, even although there be no cardiac disorder, we find the feet swollen at night, so that the patients complain of their boots being too tight, and the ankles may be seen to pit upon pressure. Under the action of vascular tonics this condition will disappear, the ankles no longer swell, and deep and continuous pressure produces little or no mark upon the skin.

Another most valuable tonic, *strychnia*, has an action even more widely extended over the body than *digitalis*. It is at once a gastric, vascular, and nervous tonic; it aids digestion like other simple bitters in the way already described. It has with the exception of quinine, a more powerful action than most other bitters in preventing putrefaction. It excites the sensibility of the vaso-motor centre, thus exerting a beneficial effect upon the circulation, and likewise directly stimulates the nervous tissue of the spinal cord itself. So great is its effect upon the vaso-motor centre that by its means physiologists have discovered that, instead of being confined to the medulla oblongata, as was formerly imagined, this centre extends down the spinal cord. It has just been said that an impression made upon the sensory nerves, reflexly stimulates the vaso-motor centre, contracting the vessels and raising the blood-pressure, but when a cut is made across the spinal cord just below the medulla oblongata, this result is not produced. From this experiment it has been concluded that the vaso-motor centre was entirely confined to the medulla oblongata above the place of section; but if a little strychnia be now injected into the veins of an animal in which the cord has been thus divided, and a sensory nerve be then irritated, the vessels will contract and the pressure of the blood will rise. It thus becomes evident that the vaso-motor centre extends down the cord from the medulla, but that its spinal portion is so feebly developed that under ordinary circumstances it has no power to contract the vessels when reflexly excited by stimulation of the sensory nerve. But strychnia has the power to increase its excitability so much, that reflex stimulation in this way will pro-

duce through it a decided effect. Now when we consider that sensory impulses are proceeding every moment from the skin to the vaso-motor centre, we can readily perceive how a slight increase in susceptibility produced by strychnia will have a wonderful effect in raising the tone of the vessels, and aiding the circulation. The mode in which quinine acts is not so clear, but we know from observation, that, also in small doses, it renders the pulse stronger and less compressible.

We have now seen how tonics may increase the quantity of nutriment taken into the body generally, how by their action on the vessels they quicken the circulation of intercellular fluid in the tissues, and by thus aiding its oxidation, and removing the products of waste, they greatly increase the functional activity of the various organs of the body.

We have now to consider how they effect the removal of waste from the body generally. The intercellular fluid in which these products are contained is absorbed into the general circulation by the veins and lymphatics. Unless some provision were made for its removal, it would soon accumulate in the blood and arrest the functional activity of the various tissues, beginning with that most susceptible of all, the nervous tissue, causing death. But these substances in all probability undergo further oxidation in the blood after their absorption and before they are finally excreted. This oxidation will be assisted if the respiratory movements by which oxygen is taken into the lungs are rendered deeper and more frequent, and also if the blood itself should require greater power to absorb this oxygen. Now strychnia has an action upon the respiratory centre in the medulla oblongata similar to that which it exerts upon the vaso-motor centre, and under its action respiratory movements become both quicker and deeper. No such effect is produced on the medulla by such a tonic as iron, but under the influence of this remedy the blood corpuscles not only become greatly increased in number, as was shown by Dr. Gowers in a recent paper in the *Practitioner*, vol. 20, page 1, but they also contain a great amount of hæmoglobine. Oxygen is thus more rapidly carried from the lungs to the tissues, and the process of combustion can thus go on more readily, both in the tissues themselves and in the minute blood-vessels into which the products of waste

have been absorbed. The rise in blood-pressure which occurs under the influence of the tonic not only affords, as we have just seen, the most favorable conditions for oxidation in the tissues and for the removal of the products of waste from them, but it also assists in their elimination from the body itself. It has been shown by Ludwig and his scholars that the secretion of urine is, generally speaking, proportional to the pressure of blood in the renal glomeruli, and thus the pressure would rise along with the tension in the vascular system generally. The contraction of the vessels which tonics produce will therefore raise the tension in the kidney as well as in other parts of the body, and thus aid in the elimination of the products of waste.

From what has just been said, then, it would appear almost that strychnia or nux vomica is one of the most valuable tonics which we possess. When combined with nitro-hydro chloric acid it is perhaps one of the most efficient remedies that we can give for the debility which is so often noticed in warm weather, and when the ordinary tonics, such as gentian, columba, cascarilla, or quinine do not produce the desired results, the addition of a little nux vomica or strychnia to them may give us the wished for effect.—T. LAUDER BRUNTON, M. D., in *The Practitioner*.

CURRENT LITERATURE.

PUBLIC HEALTH.

No more gratifying sign has been evinced of the attention of which the public-health questions are receiving in this country, than the appearance of an article with the above caption from the pen of the distinguished Dr. Elisha Harris, of New York, which appears in the *North American Review* for November-December. From this article we make a few extracts, and ask the attention of the members of the new Legislature of North Carolina to their careful consideration.

“The public care of health is no longer exclusively the concern of

medical men and sanitary officers. The people generally are inquiring into the nature of those sanitary duties by which diseases are prevented and the health of families and communities promoted and protected. This growth of popular knowledge and interest in regard to sanitary duties is awakening just conceptions of responsibility, both in respect of the individual or family, and of the community, city, or State.

“To all classes of people, though perhaps first to the municipal and State authorities there is a practical lesson in the pestilence of yellow fever now desolating the cities and towns of the Mississippi Valley. The paralysis of commercial interests in that vast region is felt far and wide, while millions of people, who remain unharmed by the epidemic, join with the Boards of Trade and Chambers of Commerce in pouring out abundant sympathy and benefactions for the sufferers. Contributions amounting to a million dollars, with materials for relief of every kind, have thus gone forward. But as soon as the pestilence ceases, and even now, will the people ask, as our best hygienists have for years been urging, with reason, that the epidemic propagation of yellow fever shall be prevented.

“The health of cities and villages is found to be almost equivalent to a public assurance of their prosperity and good repute; and, whenever throughout the domain of a State or a nation the public health is generally good, the people will bravely surmount their common adversities in business or war. The health of the great cities also seems to comprehend in no small degree some of the most important social and political problems of the times; and, as municipal methods of government provide for more effectual action in matters of sanitary police, as well as for more ample facilities and safeguards for health than can generally be supplied by the operation of sanitary law in hamlets and rural districts, there certainly are, in city life, some important counter-balances in favor of health. Even in London the average health of its more than three and a half millions is higher than in the marshy districts of Bedfordshire, or even in some of the open and more prolific regions of East Yorkshire. The art of health in such a great city comprises many things that only the ablest sanitary engineering and supervision can secure. New York, Philadelphia, Boston, Baltimore, and Chicago, already illustrate the fact that, throughout the dwelling-areas in our great cities, it is entirely practicable to secure facilities for healthy living which give a lower death-rate in such favored streets or districts than the suburban and rural hamlets suffer. Intelligent people are not slow to interpret such practical advantages of the care and provisions for the public health; hence they are urging the improvement of town-sites, and the introduction of ample supplies of pure water, the planting of parks and the sewerage of streets.

“In each of the great cities just mentioned, the healthy districts overlook other areas which are continually smitten with preventa-

ble sickness and mortality, and which are the hot-beds and even the breeding-places of epidemics, that waste the lives of dwellers therein, and seriously menace the inhabitants of neighboring healthful areas. Murray Hill in the city of New York, is flanked by foul and crowded tenement-houses, and from the City Hall, the Academy of Music, or Stuyvesant Park, it is but a few hundred yards to the tenement rookeries in which constant sickness afflicts from ten to twenty in every hundred, and death takes from forty to sixty in every thousand of the inhabitants during the year. In like manner, in Boston, the mansions of health on Beacon Street look down—towards South Street—upon a dense mass of human wretchedness, in which the sickness and death-rates are enormous. Philadelphia has its “Alaska District,” hard by the old Pennsylvania Hospital; and Baltimore has its Fell’s Point, and “a little local grievance of its own, called the Basin,” the only spots in which yellow fever ever has gained foothold in that city.

* * * * *

“The popular estimation of the importance of health was immensely increased during the late war in this country, and a like result has been witnessed in the European countries which have been testing their martial strength yet the broader views of the practical importance of health to individuals, to families, and to a nation, must be toned and strengthened by the highest moral considerations. The wasting of human life by preventable disease implies far more important consequences, and quite different results, than those accepted by the Malthusians in their stoical dogmatism. The continued or frequent recurrence of pestilential epidemics, even the excessive death-rates, in any community or country, can properly be taken in evidence of the perilous presence of various conditions, both material and governmental or social, which tend to the pauperizing, enfeebling, general harm, and decivilization, of the people. The empires of Great Britain and Germany have their chief strength, prosperity, and prospective permanence, in the vigor and soundness of the manhood of their populations; and though the astute Mr. Disraeli, when touching the English pulse on public-health questions, petulantly paraphrased his significant exclamation, “Sanitas sanitatum, omnia sanitas!” the feelings of the English people inspired the words of the statesman who has become their Beaconsfield.

* * * * *

“As science and social culture advance, the public service of hygiene is invoked more and more, until now there is evinced a general readiness and expectation, amounting to strong desire in many respects, for the interposition and provision by statutes and supervisory officials to secure the perfect cleansing and scavenging of all private premises, the ample conversation and distribution of the purest water, the safest and best means of lighting, the supply of perfect, and only perfect, food-materials, the public re-

straint of wanton vices, the limitation of child-labor at wages, and the prevention of cruelties and other wrongs to the health of young children, etc., etc. All this is occurring in our day as evidence of an advancing civilization; and perhaps there is nothing stronger and more significant in all this evidence than that the people are endeavoring more and more to avail themselves of such important means of sanitary improvement and public health care. Who would have believed, twenty or even fifteen years ago, that the city of New York would have accepted the vigilant system of sanitary supervision which is now enforced under that remarkably effective piece of legislation known as the Metropolitan Health Law; and who would have expected that the States of Massachusetts, Connecticut, Rhode Island, and Michigan, would have organized such efficient State Boards of Health as are now in operation? The popularization of physiological and sanitary knowledge and the inculcation of the duties of private hygiene have kept pace with the works of public sanitation and rendered practicable the operation of sanitary codes and the organization of sanitary duties.

* * . * * * *

“The time seems to have arrived for revising some of the methods of the public care of health, and for extending such care and supervision sufficiently to serve the highest interests of the masses of city populations, and also to insure adequate sanitary protection to the domain of the individual States and of the nation. The first considerations which urge to such organization and enlargement of State and national care of the public health are, the purely material and commonplace requirements of personal and public safety and economy. There is no power or wealth that can safely take the hazards and fatal losses which individuals, communities, and States, incur when an infectious pestilence like yellow fever or cholera, or a contagious and subtle malady like diphtheria, typhoid fever or small-pox, invades a people. There is rarely any individual ability even to remove and prevent the miasmata and local sources of the worst of the lingering diseases that afflict hamlets and towns. Unfortunately, as local or town authority is usually organized and administered in the United States, it is poorly adapted—indeed, is hardly adaptable—to exercise the functions of good sanitary government, so far as relates to any trustworthy measures for protecting the public health. This remark does not militate against the policy of local government, but it has reference to the fact that the specific, abundant, and ever-ready knowledge of the causation, habits, records, and course of preventable diseases, and of the best means of controlling and utterly preventing them, and of warding off and stamping out infectious pestilences when they menace any place, is seldom or never at hand in small communities, even in the villages and new cities. Central intelligence and a constantly-replenished source of information and counsel are essential means for

securing adequate care of the public health, and such a central service in the State must ere long be regarded as an indispensable part of the government. The State Board of Health is quite an inexpensive body, and its utility is now well tested in fifteen States of the Union. The results, thus far, fully confirm the view we express. In numerous instances, as in the States of Massachusetts, Michigan, and Wisconsin, the cash-value of the life and sickness-saving benefits to a single group of villages or a city has far exceeded the money expenditures of the State Board of Health for two years. The States of Louisiana and Tennessee failed to confer upon their Central Sanitary Boards any authority adapted to confront and repress the infectious factor of the cause of yellow fever, or even to cleanse away and extinguish the local factors of the disease. The consequences—calamitous beyond description—cannot be expressed in numbers, nor estimated in millions of money. Unfortunately, the special plenary powers which the States have conferred upon town and parish officials to be exercised in the presence of infectious disease, have been, and most frequently are, so used as most perniciously to augment the popular panic, and increase rather than abate the most essential local causes of an epidemic visitation. The *cordon sanitaire* takes the place of sanitary cleansing and effectual disinfection, while the cordon itself becomes like a rope of sand—a fatal cheat and illusion.

* * * * *

“The public health depends alike on personal hygiene and public sanitary works and services, and the latter duties are encouraged and cheerfully sustained just in proportion to the progress and enlargement of true physiological knowledge and means of personal and domestic health. Even the judicious and adequate adaptation of public measures for sanitary improvement, or for protection against causes of disease, depends on correct knowledge of the laws of life and of the phenomena and facts of the natural world. A great interpreter of the science of physiology and hygiene has remarked that, “if we had a perfect knowledge of the laws of life, and could practically apply this knowledge in a perfect system of hygienic rules, disease would be impossible; but at present disease exists in a thousand forms, and the human race languishes, and at times almost perishes, under the grievous yoke. * * * An accurate identification of the diseases is the first necessary step in the investigation of causes; * * * the causes being investigated, the art of hygiene then comes in to form rules which may prevent the causes, or render the frame fitted to bear them.”

* * * * *

“Viewing the fields of sanitary investigation, and public health care in the light thus shed upon them by the ablest minds and best experience, the conclusion is that these fields become enlarged and more prolific as they are cultivated; and that, as the popular knowledge of the conditions of healthy living and of the preven-

tion of causes of disease become extended, the public health will receive greater care and protection by municipal and State provision and the highest resources of science ; while hygiene, as at present taught, will become extended, and "the new biology will open fresh fields for research, and shed on them brighter lights." The problems of the public health now require that, by the municipal authority and all the available agencies that the people can employ, the filth of towns and cities, and the "filth diseases" and infections also, shall be controlled and the causes prevented by official supervision and interference ; that epidemic and pestilential diseases, and all other causes of preventable sickness and mortality, shall be promptly investigated by expert hygienists under official sanctions ; that the causes of mortality shall be accurately certified, after faithful verification, not only in cities, but in all places, and that the records of death shall be made under State authority, and be supplemented with careful sanitary investigations and records of prevailing diseases ; that the sanitary protection of schools and public assemblages, of tenement populations and all congregate dwellings, and whatever general hygienic measures are required for the common welfare of the people, shall be under the most competent official supervision ; that sanitary surveys, the systematic drainage for health, the supplying of pure water in abundance to cities and villages, the regulation of comprehensive measures of external sanitary police, and quarantine practice shall receive all necessary aid and facilities by State and national laws—the legislation and practice in these branches of sanitary work and service being based on the fact that the laws of human life and health have no politico-geographical boundaries ; and, especially, that sanitary knowledge and all the essential duties of civic and domestic hygiene should be popularly inculcated by all available means."



EXAMINATION OF THE NEGRO THOMAS, WHO ARRESTS HIS HEART'S ACTION, AND PRETENDS TO THROW HIS HEART INTO THE ABDOMEN.

Dr. Middleton Michel, of Charleston, gives us in the *Boston Medical and Surgical Journal*, October 31, 1878, his analysis of the phenomena exhibited in the case above mentioned. Thomas' case will be remembered by many medical men, but, we doubt, if a clearer view of it could very well be given.

Dr. Michel thinks that the explanation of this supposed dislodgement of the heart certainly rests upon the exagger-

ated play of the lung and diaphragm, and upon nothing else. If a fissure of the diaphragm existed, and displacement occurred, even as a hernia, it should have to take place during *relaxation* of the muscle, while the fissure was open, whereas the pretended displacement takes place during violent muscular effort.

He concludes :

“The obstruction to the circulation in this man’s case is **mechanical**, depending upon the suspension of his breath. The illustrious Hunter could control his heart’s action by interrupting his breathing until the former would almost stop its contraction. We are fully aware that the heart possesses an autocratic biotic force, and pulsates when removed from the body ; but like all other muscles, if injured by a blow or by attrition of its fibres or over-distension of the same, it for a time becomes paralyzed, and its rhythmic autocratic movements cease. Now, when the breath is held, the un-aerated blood is obstructed first in the capillaries, then in the arterial system, and finally the systemic heart becomes distended enormously, and incapable of emptying itself. If this distention increases, rhythm first disappears, pulsations becomes feeble, and in a few seconds all contractions cease. The obstruction commences in the capillaries, and not in the lung ; the accumulation of blood is in the arterial system ; and the arrest of flow in the blood is retrogressive. It is in this manner that a temporary interruption to the circulation and heart’s action is effected by those who through practice have habituated themselves to endure a suspension of function not perhaps unattended with imminent risk to life if carried too far.”

“The subject of this report is a negro, perhaps thirty years old, of great muscular development, which has been exercised in certain directions to so remarkable a degree that voluntary control over and power in particular muscles make him an interesting object of study.

“He first exhibits an extraordinary play of the abdominal muscles, which are made to contract, not simultaneously, as may be done by any one, but in separate layers, and in the several divisions of the recti, which are successively and violently contorted into vermicular contractions ; slowly, then more rapidly, first from below upwards, then reversing their action, from above downwards.

producing rigid intumescences at one point and passive depressions at others, all of which is repeated with increasing frequency and vehemence until the sum of these muscular acts culminates in a tetanic rigidity, which seemingly expresses the aggregate of the force of all the fibres of all the muscles in the abdominal walls. Resting from the fatigue obviously attendant upon this exertion, he now proceeds to exhibit his ability to displace the heart into some one region of the abdomen. This, which he considers to be his great feat, he apparently accomplishes as follows : He invariably bends the body forwards to a greater or less degree ; takes a deep inspiration, not suspending the breath, but on the contrary, maintaining the diaphragm as depressed as possible by keeping up very imperfect movements of expiration ; then he throws certain abdominal muscles into contraction, depressing the greater portion of the walls of the abdomen, while he bulges out the region or spot where he assumes the heart to have migrated. This effort, interrupting the normal play of quiet respiration, is not long sustained ; during a brief period the ear in the præcordial region certainly discovers, at first, a disappearance of the heart's pulsations, though these are soon again detected most faintly under a marked recedence of this organ from its natural position ; while over the abdominal projection a cardiac murmur, more distinctly audible, is soon replaced by a *bruit de souffle*, which he voluntarily intensifies by periodic accelerations, as though this sound were due to the play of muscular action, being not unlike the well-known muffled sound induced by muscular fibres while contracting.

“ His next performance consists in arresting the heart's action and the pulse at the wrist,—a phenomenon well understood by physiologists ever since the case of the Hon. Colonel Townshend, and which your reporter has seen more completely accomplished, perhaps, by others than by this individual. Here, again, he takes a very deep inspiration, but on this occasion suspending his breath completely,—a most necessary condition for the successful accomplishment of his purpose,—when all cardiac pulsation ceases, and the pulse-wave is no longer felt at the wrist.

“ His particular achievements, then, consists in repetitions of these three acts, abdominal muscular contortions, displacement of the heart, and temporary suspension of its action, the true nature

of which we must now investigate, though we at once anticipate the conclusions of this report by stating that his performances resolve themselves into a display of unusual muscularity and muscular tension only. That such is the proper explanation we shall now endeavor to show.

“This man is well developed; an athlete in form, there is no malformation discoverable. While breathing naturally the normal movements of respiration are seen, while in forced respiration the play of a perfect diaphragm becomes evident in the ascendancy of abdominal over costal respiration. There is no fissure of diaphragm: indeed, the violent play of abdominal muscles just described, which habit and practice have rendered truly extraordinary, with such a deformity present, would drive the viscera either from abdomen into thorax, or from the chest into the abdomen, and render any such performance painful, dangerous, and perhaps, wholly impossible. The presence, therefore, of this perfect septum between thorax and abdomen makes it impossible that the heart could leave the thoracic cage. We reject the assumption of a migration of the heart from its normal position to various parts of the abdomen, whither he pretends to convey it, because we have ascertained the presence of a perfect diaphragm, and not upon theoretical preconceptions of the impossibility of a translation of this organ from the thorax to the abdomen through a fissure of the diaphragm. That he effects something in this attempt is positive; that he simulates very wonderfully a displacement of his heart is evident; but the explanation of the phenomenon he presents rests upon physiological and not pathological conditions.”

THERAPEUTICAL NOVELTIES ON TRIAL.

We must congratulate Dr. W. P. Gibbons upon the successful exposure he has made of a kind of imposition which is fast growing all over the country by the liberal help of the printer's ink of many leading pharmacists. While such men as Wood and Ott in this country, and Fothergill, Ringer and Binz abroad, are reinvestigating remedies known in the early history of medical science.

preparations of the most dubious sort are temptingly brought again and again to the attention of the public by enterprising druggists, always endorsed by a learned and startling dissertation on their wonderful medical properties by some one able to put M. D. to his name.

It is not so much to be wondered at that new remedies should be adopted with eagerness, living as we do in the midst of a rich harvest of such genuine discoveries, and there is a degree of caution and good judgment to be exercised in adopting a remedy, that can only be possessed by physicians of mature education. To the junior practitioners, who have not followed many vaunted remedies to an early grave, it is well to give a caution.

Dr. Gibbons in a paper read before the Alameda County Medical Association of California, (*Pacific Medical and Surgical Journal*, October, 1878) shows, that the botanical and therapeutical wonders lauded by Dr. J. H. Bundy, of California, are not so wonderful after all.

Of Yerba Santa, (*Eriodictyon glutinosum*), one of the new remedies, says he does not consider its medicinal value well established, although it was used by Dr. Saxe, of Santa Clara, with good results in pulmonary diseases and affections of the throat.

Berberis Aquifolium, (Barberry), another of the new remedies, probably differs very little from the well-known species which has never been able to attain to a higher dignity than secondary in the Phar. U. S.

Cascara Sagrado. "There is no such plant known to any botanist on the Pacific coast." Dr. Gibbons received some specimens of barks, among which was the drug sold as *Cascaro*, which was *Rhamnus Persica*; but "as there is no such species of *Rhamnus* known in the United States or elsewhere, that I know of * * * it is probably intended to designate the *R. Purshiana*, D. C., one of the four species found in California." "Here then is the key to this wonderful unknown plant." Of the medicinal virtues of *Rhamnus* or Buckthorn, nothing need be said.

"*Yerba Reuma*. He (Dr. Bundy) tells us the yerba reuma is a plant, herbaceous, growing near the foot-hills, and it contains chloride of sodium and a peculiar astringent. This is all the history of the plant which he gives—perhaps he tells all he knows,

and more. In communication with Mr. Lloyd, of Cincinnati, he inclosed me a specimen of grass which he says is the article put upon that market as yerba rcuma. It is *Bryzopyrum spicatum*, of Hooker, which covers every sand-beach and marsh along this coast."

"There is yet another plant which this reputed doctor (Bundy) claims as one of his trophies, its value being discovered after "years and months" of toil. *Grindelia Squarrosa* and a short notice of *Grindelia Robusta*. *G. Squarrosa* is described in Torrey and Gray's Botany, but in the new California Flora of Dr. Gray it was omitted from the list because it was not a good species.

THE CALIFORNIA MEDICAL LAW SUSTAINED.

We congratulate the profession on the decision of the Supreme Court that the Medical Law as amended by the last Legislature is constitutional. This decision, which is final, establishes the validity of all the proceedings of the Board of Examiners, and secures the success of all prosecutions against quacks and unlicensed practitioners. An opportunity will now be afforded to reap whatever benefits the community may derive from the law. Further than this, the California decision will have an important bearing in support of legislation in the same direction in other States.—*Pacific Medical and Surgical Journal*.

"GELSEMIUM VS. GELSEMINUM."

There has been quite a spirited discussion in the London *Lancet* respecting the proper spelling of this well-known drug. Mr. Henry Trimen, an authority of high standing, says in the issue of Oct. 5th, the name is *Gelsemium* and remarks that "it would be convenient if pharmacists would adapt their nomenclature to (this) the scientific one."

EDITORIAL.

NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DEROSSET, M. D., 46 West 36th St., N. Y. } Editors.
THOMAS F. WOOD, M. D., Wilmington, N. C. }

Original communications are solicited from all parts of the country, and especially from the medical profession of North Carolina. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.

THE NORTH CAROLINA BOARD OF HEALTH.

On another page in the present number we give an outline of a plan upon which to found our future State Board of Health. One of us has been engaged in this work since the bill was presented to the Medical Society of North Carolina, and for the lack of means, and also for lack of sympathy and aid from the medical profession in the State, nothing further was accomplished than a thorough canvass of the medical profession, announcing the design of the Board. As futile as the result seems to be, it is not barren of good, for it has enabled us to forecast the plan of the line of action which promises the best success.

The question will occur, why, with the models before us of the Massachusetts and Michigan and other Boards of Health have we deviated from their mature plan? We answer, because an extensive knowledge of the condition of the profession in North Carolina, and of the prospects of help from the Legislature have in-

clined us to believe that the beginnings we have indicated include all the essential matters upon which to build a work of great future excellence and all that we could hope to get from the Legislature.

We know that it is a waste of time and stationery to urge physicians to give voluntary aid, and it ought not be expected; certain it is that nothing but irregular reports have ever resulted from the voluntary plan.

In the State of Georgia where it was compulsory upon physicians to make certain reports, it was done with some system; but as soon as some unwise legislator thought that the fine imposed for failure in such instances too severe a penalty, it was removed, and Secretary Taliaferro was obliged to ask that the law be restored.

At a meeting of part of the Committee appointed to devise means for the execution of the trust imparted by the Legislature of North Carolina to the Medical Society, several resolutions were passed calling upon physicians to send in material to make a report to the Legislature through the Governor. A correspondent of the *Wilmington Review* taking the action of the Committee as a text, calls upon the "physicians of the State to make reports at once to the President of the State Board of Health, of epidemics in their respective localities with such facts as to causes of disease and suggestions thereupon as may be of interest."

This is all folly. If the physicians of the State previously informed of the plans devised by the Board, and furnished with blanks to aid them and save them clerical work, have utterly abandoned the Secretary and have sent no reports for six months, what would be the value of reports gotten up for the purpose of enabling the President to make a report? It is from such jejune performances that this new work must suffer. If we cannot carry to the Legislature a matured and truthful report, let us go frankly to that body and say why we are not able to do it.

If the correspondent referred to, thinks that the argument for increase of means and powers of the Chairman of the Committee would be strengthened by crude generalities he is mistaken. If the Legislature does not arrive at conclusions from the sad history of the late plague, we cannot see what advantage we are to gain by going to the Legislature and before the world with a "windy report."

The short of it is, we took upon us a great work without money. We have done nothing more than all new boards have done before us—we have merely surveyed the situation to see what we can make of the task entrusted to us. With this experience gained we can more confidently ask the Legislature to increase our means and extend our power.

If the Committee appointed to this task will meet in Raleigh and gain the ear of the Legislature at the proper time, and state honestly the necessities of this great work, leaving out of sight for once the high sounding triple adjectives of self praise, and supreme laudation of the profession, the chances for a Board of Health in fact as well as in name will be good. If medical men get tired of this eternal blast of self-praise with which some of the profession season everything they write, it may be reasonably expected that the Legislature could get along without it.

OUR PARIS CORRESPONDENT.

We regret that our distinguished friend and correspondent, Dr. Edward Warren-Bey, is so afflicted with the sequelæ of Egyptian ophthalmia that he is not able to resume his attractive correspondence. He has our hearty sympathy.

OUR NEW YORK CORRESPONDENT.

Our readers will, no doubt, miss the instructive reviews of the current of medicine from New York city from the pen of Dr. DeRosset. He will make ample amends in our December issue.

REVIEWS AND BOOK NOTICES.

FIFTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN, FOR 1877. 500 pages. 8 vo. Lansing, W. S. George & Co., State Printers. 1878.

It is difficult to make a satisfactory review of a work so full and so varied as this report of the Michigan Board of Health.

It is at the same time a most creditable frame work of a science in its formative stage, and a careful record of work done by conscientious officers for a generous State. Massachusetts is the only State which can compare with Michigan for actual advance in the State Medicine. No other States can show such a symmetrical entirety as is here furnished, and the secret of this success is nothing else but a proper appreciation by the community of the necessity and value of the work. Michigan has spent money to teach her citizens how to save life and promote health, and her return will be ample for the money expended.

What State can afford to be without a Board of Health? If any of the elect members of the next Legislature of this State think they can, we will undertake to enlighten them by giving them access to our copy of the Report of the Michigan State Board of Health. This, with the Massachusetts reports must be our text books for some time to come, and we long for the day when North Carolina can boast of so useful a piece of machinery as the Michigan Board of Health.

THE CELL DOCTRINE : Its history and present state. For the use of students in medicine and dentistry. By JAMES TYSON, M. D., Professor of General Pathology, &c., University of Pennsylvania. Second edition. Illustrated. Lindsay & Blakiston. Philadelphia. 1878.

This little work of 200 pages has been well received by the profession as is evidenced by the demand for a second edition. It reviews the history of the present modern cell-pathology, and will be constantly consulted by students and practitioners who desire to obtain in a short space a competent knowledge of the subject. The

copious bibliography appended will also enable the student who desires it to enter upon special and profounder study of the subject.

PRACTICAL SURGERY : Including surgical dressings, bandagings, ligations and amputations. By J. EWING MEARS, M. D. Demonstrator of Anatomy, Jefferson College, &c. With 227 illustrations. Philadelphia, Pa. Lindsay & Blakiston. 1878.

There are practicing physicians who "have no time to read," it is said, and to that class of doctors this work must be intended. In its 290 pages a diversity of surgical subjects is treated, but chiefly is it devoted to practical matters in minor surgery, taking the place of "Sargent" now out of date. The illustrations are quite copious, and the general appearance is that of a helpful guide in emergencies, while the volume is compact enough to be carried in the coat pocket.

TROMMER'S EXTRACT OF MALT.

DR. REDWOOD'S ANALYTIC DEPARTMENT.

17 BLOOMSBURY SQUARE, LONDON, W. C., Sept. 18, 1878.

I have examined the extract of malt manufactured by the Trommer Extract of Malt Company, and judging from its physical character and chemical reactions, I am of opinion that it fairly represents what its name indicates, that is, that it is a preparation of malt in which are contained the essential properties of that substance, with a slight addition of the aromatic bitter of the hop. It has the character of a soft extract, in the sense in which that term is used pharmaceutically; and it has evidently been prepared with great care and judgment, as it retains the property of acting on amylaceous bodies as diastase does, while the extract itself bears long keeping without change. It also possesses the property of forming with cod liver oil a permanent mixture or emulsion, in which the taste of the oil is very effectually covered, and its administration thus greatly facilitated. [Signed.]

T. REDWOOD, PH. D., F. R. C., S., etc.

Professor of Chemistry and Pharmacy to the Pharmaceutical Society of Great Britain.

EXTRACT OF MALT.—This preparation has been steadily growing in favor in the South in the last few years, until to-day it enters largely into the dietary and therapeutics of practitioners, many of whom are slow to adopt new things. We have used it with excellent results in treating strumous diseases, and especially in convalescence from malarial fever in combination with citrate of quinine and iron. As a vehicle for cod liver it succeeds, because it rarely disagrees with the stomach, and its nutritive equivalent is a known quantity. We have had under our care several cases of the bullous eruption so frequently met with as a concomitant of diphtheria, in which the preparation of malt—particular malt with alteratives—has given excellent results, employing at the same time mercurial ointment locally. Whether as an adjuvant of nauseous medicines, or as tonic, taking the place largely of alcoholic drinks, we have a preparation whose range of application to diseased condition, has not yet been generally appreciated.

STATE BOARD OF HEALTH.

It is only a question of time as regards the establishment of a Board of Health in North Carolina, but at present, both the State and the medical profession are in a wrong attitude before the world. This State is put down in the list of States having a Board of Health, which may mean an establishment like that which has placed Massachusetts in the front rank of civilization, or it may mean a struggling body in the act of gradual development. It means neither in North Carolina, for while we are said to have a Board of Health, we have only the name and not the substance. We are before the world as a progressive State, entered into the lists upon a great work requiring money, industry, learning, whereas we have only the grim skeleton of a body, with *a hundred dollars a year* to nourish it; granted privileges by the law-givers of the State to do what we could have done without it, and have been doing for twenty-five years, without any grants from them. But the world judges us by results, having neither the time nor the in-

clination to hear the apologies we have to make for not being abreast with other States.

It was a courageous act of the Medical Society of North Carolina to accept the bill creating the Board of Health; for it had more the appearance of a bone tossed to a hungry animal to keep it quiet for a little, than the act of men selected as the representatives of the people. But so anxious was the profession in the State to make a beginning, that instead of returning the bill to the Legislature with the sharp rebuke it deserved, the Society appointed a committee to execute the task of bringing something out of nothing.

It did not take long to demonstrate that the Committee lacked the cohesive power of money,—in fact it was well enough known before the start. The Secretary at once put the Committee in correspondence with the older organizations in the country, and from them—and particularly may be mentioned the Board of Health of the State of Michigan—received most courteous and efficient aid. As this correspondence grew, it was more clearly demonstrated that the task undertaken was hopeless. Correspondence was at once begun, also with the different counties of the State setting forth plainly the situation, and explaining the aspirations of the Committee. By the aid of the Secretary of State, we were enabled to send out circulars, asking that County Societies be formed as a starting point for the collection of mortuary statistics, and of the invasion of diseases dangerous to the public health. The Secretary considered himself fortunate to get the ear of even those whose personal acquaintance he was favored with, and for a time it seemed that some efficient work could be accomplished, but these voluntary offerings, requiring as they did considerable clerical work, and in most instances long journeys and loss of time, soon failed, until in less than six months all correspondences had ceased, and the mass of matter on hand was not available for any purpose, except, perhaps, to enable the Committee to say definitely to the Society—we have tried, and have without means shown that there are strong symptoms of the ripeness of the profession for the work so soon as they see the way to its successful prosecution. While all this was discouraging to some of our body who looked upon an act of Assembly as some potent

charm ready to effect its purpose as soon as passed, it has not discouraged those who have evidence of the slowness but faith in the sureness of North Carolinians.

We have a definite plan to propose to the next Legislature, which is the outgrowth of our work with ninety-two counties, and while we are aware of its imperfections we should have its adoption as the beginning of an encouraging era in State Medicine :

I. The Board of Health should be composed of nine members. six physicians elected by ballot by the members of the Medical Society of North Carolina. Three members appointed every two years by the Governor, one to be an engineer. Two of the six members elected by the Medical Society of North Carolina should serve six years, two, four years, two, two years.

II. There should be an auxiliary Board of Health in each county in the State having a town of 300 inhabitants, according to the census of 1870. This local board should be composed of regular physicians, and Chairman of the County Commissioners, and the County Surveyor. From this number, one physician should be selected as Chairman, whose duties should be as follows : Superintendent of Health, keeping the register, and collecting statistics to be hereafter mentioned; to make post-mortem examinations, and attend the prisoners in jail, poor-house and work-house. For his services his compensation should be from \$800 to \$300 in proportion to population.

III. Monthly reports should be made from register of births, deaths and marriages, and of cases of diseases dangerous to the public health, sent to the Secretary of the Board, by the 5th of month succeeding. The penalty for not reporting to be \$5 for every monthly failure after the expiration of ten days—that is after the 15th of the month.

IV. Register. A register should be kept by every physician in a memorandum book furnished him by the Secretary of State Board, and a copy sent on the last day of each month by the Secretary of the local board. The Register should be upon the plan of the one already issued.

The County Superintendent of Health should also collect statistics to enable him to fill up the blank books issued by the Board of Health on the following topics, viz :

The nature of the soil ; acres in swamp land ; acres in marsh-land ; acres in other wet-land ; the streams and ponds ; the period during which any of these bodies of water are stagnant ; the periods during which any are dry ; the natural drainage of the land ; the soil favorable for natural drainage ; the means of artificial drainage ; the lineal extent of ditches and canals dug ; the nature of drinking water ; its sources ; the depths of wells ; the proportion of dwellings having cellars ; the conditions of these cellars ; the proportion of timbered land ; the crops raised ; the fruits raised ; the proportion of dwellings constructed of wood ; those of brick ; the average number of rooms to a dwelling ; the method of warming houses ; the means of ventilation ; the distance of privy from dwelling ; distance of privy from the well ; sickness traceable to drinking water ; the employments of citizens ; deaths from special trades ; the means of artificial light ; the employment of paris green as a bug exterminator and effects on health ; the causes of the greatest number of cases of sickness ; the invasion of epidemics ; the first case of any contagious or pestilential disease, &c., &c,

The returns from this source should be sent in by the 5th of January, at the latest the 15th, under penalty of \$5.00.

V. *Quarantine*.—Inland quarantine should be under the control of the County Superintendent of Health, who acting by the advice of the County Board should see that the following diseases are isolated, and a guard put over the patients affected : Small-pox, cholera, yellow fever, and scarlet fever. Any violation of the quarantine rules hereinafter mentioned, to subject the offender to imprisonment 20 days, and a fine of \$25.00.

Foreign quarantine in places where it already exists by law should be in every way aided by the local Board.

VI. *Abatement of Nuisances*. Whenever and wherever a nuisance upon premises should exist, which in the opinion of the County Superintendent of Health is calculated to cause sickness, it shall be his duty to notify the parties occupying the premises of its existence, its character and the means of abating it. Upon this notification the parties shall proceed to abate the nuisance, but failing to do this shall pay a fine of \$3.00 a day for every day dating from twenty-four hours after the notification. Provided however,

that if the party occupying the premises shall make oath before a magistrate that he or she is not able to carry out the orders of the County Superintendent of Health, it shall be done at the expense of county, city, town, or as the premises may be located.

VII. Of the performance of necessary hygienic work—of water-works—sewers—drains—(to be given hereafter,) and the necessity therefore must be passed upon by the majority vote of the local Board of Health and mayor of city or town.

VIII. *Vaccination.* Secretary of the State Board of Health to supply on demand to Superintendent of local Boards reliable animal virus, free of charge, to the extent of a dozen quills. The Superintendent to vaccinate and re-vaccinate every November all applicants, and in time of an outbreak of this disease, vaccination and re-vaccination to be resorted to until every one is protected.

IX. *Bulletins of the Outbreak of Diseases Dangerous to the Public Health*, to be issued whenever necessary, and such steps taken for their prevention of such invasions within the limit of means furnished.

Aid for pestilence Stricken Districts.—It shall be the duty of the State Board of Health to make inquiry into any outbreak, by personal visits to localities if necessary, expenses to be paid by the Treasurer of Board at the rate of \$5.00 and mileage, and when physicians are needed, the Board is authorized to send such as they shall select, their compensation to be fixed at \$5.00 per day.

X. Circulars of advice may be issued by the Board whenever they deem it necessary for the public health, and the bills for printing to be paid by the Treasurer on demand in form.

XI. *Annual Reports by the Secretary* to be made, covering a review of statistics gathered, and all information in his possession on points connected with his office.

XII. The compensation of County Superintendents to be paid out of the County Treasury, upon a bill approved by the President of the County Board. All fines collected by County from persons offending against the public health to be applied to the payment of salaries and expenses, and the deficit to be paid by the county.

XIII. The State Board of Health shall have a President and a Secretary (who shall also be Treasurer) to be elected by the Medical Society of North Carolina, just after the members of the State

Board are selected. The Secretary and Treasurer to have an annual salary of \$——, and the other members of the Board shall be entitled to a per diem of \$5.00 while in session.

XIV. The Board shall hold a regular session every year on the day preceding the meeting of the Medical Society of the State of North Carolina, and at this meeting they must consider the annual report of the Secretary and Treasurer. If this report be approved it shall be presented to the Medical Society on the first day of its session by the President of the Board. At this session also shall all other matters be adjusted.

Special meetings, however, may be called by the President of the Board, because of the necessity of the investigation of a disease or diseases dangerous to the public health.

XIV. When the County Superintendent of Health has reason to suspect poisoning in a patient examined for coroner's inquest, it shall be his duty to forward such suspected material to the chemist of the Agricultural Department under seal, the packages being sealed in the presence of witnesses.

The chemical examination of soils, drinking water, food or other substances, when in the opinion of the County Superintendent, it will subserve the public health or ends of justice shall also be forwarded as above and under seal, the expense to be paid by order on the County Treasurer.

Dialyzed Iron not an Antidote for Arsenic.—A series of conclusive experiments by Edward Hirschsohn, Mag. Phar. Russia, published in *New Remedies*, for November, lead the experimenter to the following conclusions:

Arsenious acid does not enter into combination with dialyzed iron, either alone or in presence of acids, albumen or pepsin. The addition of ammonia, or magnesia, however, causes the arsenic to enter into an insoluble compound. In consequence of the results obtained in these experiments, he desires to warn against the use of dialyzed iron as an antidote in poisoning by arsenic, because the resulting combination parts with its arsenic in presence of acids, much more readily than the ordinary "antidotum arsenici" (hydrated sesquioxide of iron).

MEDICAL ANNOTATIONS.

THE DETERMINATION OF SEX IN UTERO.

Dr. Wm. B. Neftel calls the attention of the medical profession (N. Y. *Medical Record*, November 9th), to a false theory contained an article in the Boston *Medical and Surgical Journal* by Dr. Swift. The theory referred to is based on the following hypothesis :

“The ovum represents the female elements, the spermatozoa the male. If the ovum becomes impregnated by a *few spermatozoa*, the female element will be in excess and the result a female. If on the other hand, a good *many spermatozoa* impregnate the ovum, the male element will preponderate and a male will be the result.” This hypothesis leads the author to deduce a theory by which we may be enabled to determine the sex in utero, and make use of the means of producing either a male or female at will. He says further : “If the ovum is high up—in the ovary or at the fimbriated extremity of the Fallopian tube—probably only a few spermatozoa will come in contact with it, but if the ovum is low down, then the spermatozoa will be in excess.” According to this the sex depends upon the coition.

Such a theory could never have been constructed if the following positive embryological fact had been taken into consideration : Modern researches have proved that a single spermatozoon is sufficient for impregnating an ovum, or to be more correct, that the ovum can be impregnated only by a single spermatozoon, because by a most perfect mechanism the ovum, after the penetration of a single spermatozoon, is entirely protected against the intrusion of any other. This is the case both in ova provided with a special opening—micropyle—for the entrance of a spermatozoon, in those destitute of a micropyle. Thus the assumption of an ovum being impregnated by *only a few or great many spermatozoa* is absurd, and the false theory, with all its deductions, vanishes before this simple embryological fact.

SUPRA-PUBIC LITHOTOMY.

Mr. Jonathan Hutchinson read notes of a case of supra-pubic lithotomy (*Med. Times and Gazette*) before the Clinical Society of London. The calculus which was of lithic acid weighed nearly six ounces and a half, and measured nine inches in circumference at the greatest, and six at the least width. Mr. Hutchinson was not favorably impressed with the method, and thinks he would hereafter prefer the recto-perineal incision.

Post-mortem examination of the patient revealed a very much

thickened bladder, with ulcerated mucous membrane coated with secretion. The kidneys contained abscesses, and there were small pyæmic deposits in the lungs and liver.

Although great attention was paid to the bladder it was found impossible to keep it empty and avoid overflow on the edges of the wound. The first week after the operation, the patient did exceedingly well; he then began to lose flesh, and subsequently had repeated rigors. The urine contained pus and was constantly ammoniacal.

The discussion which ensued upon the presentation of this paper did not favor the supra-pubic operation.

SUB-SULPHATE OF IRON AS AN ANTI-SEPTIC IN THE SURGERY OF THE PELVIS.

Dr. H. P. C. Wilson, of Baltimore, contributed a paper with the above caption at the (1878) meeting of the Gynæcological Society, and from it we make the following extracts :

“In all cases of ovariectomy, after securing the pedicle I apply undiluted Monsell’s solution to the stump,—not to stop hemorrhage, for it is secure against such an accident by clamp or ligature, but for its antiseptic effect upon the vessels of the part. I am convinced that if the abdominal incision was closed in ovariectomy, more time were taken to cleanse thoroughly, the abdominal and pelvic cavities of all fluids and coagula, which could enter into decomposition; to let the patient recover sufficiently from the anæsthetic; to discover all large vessels necessary to be secured; and to paint all surfaces made raw by ruptured adhesions with a weak solution of sub-sulphate of iron, there would be less necessity for drainage tubes, and the liability to septicæmia would be greatly diminished.

“I have never used a drainage tube in any of my cases, and have never had septicæmia follow one of my operations. I attribute much of this exemption to the liberal use of sub-sulphate of iron.

* * * * *

“I have not used this agent in post-partum hemorrhage, and am not inclined to do so; nor have I used it as a prophylactic against puerperal septicæmia; but it strikes me, that combined with glycerine, it would be peculiarly suitable for application to the intra-uterine surface after labor, as a preventive of septic poison.

VAGINISMUS.

Dr. Matthews Duncan, of London, (in a lecture *Med. Times and Gazette*, Oct. 19th, 1878), regards the hypertrophies of bits of the hymen, hypertrophies of the orifice of the urethra, in vaginismus, as allied to lupus, and the characters which lead him to think so

are these : first, the situation of the disease ; secondly, the way in which it heals up and breaks out again ; and thirdly, the occurrence of these nodular hypertrophies of the hymen, urethra, and other parts.

He had operated on several cases affected with this ulcerative disease, by excising the diseased bits, and without success : that is, the disease had reappeared after the parts first affected were removed by the knife. What is extraordinary about these cases is, that in other women, you will have apparently the same disease, even much more, without any vaginismus, even without any pain. There are many women who have ulcerations (of which this case is a good example) who are quite unaware that they have any disease at all, who have no dyspareunia and no complaint. In a case of this kind which Dr. Matthews saw lately, operation by actual cautery was resorted to, and with complete cure of the disease, so far as the ulceration was concerned ; but the woman has now around the orifice of the vagina several tubercles, which are red, not painful, and which indicates what he has already said was his impression ; that the disease is analogous to lupus rather than to eczema or any other disease with which he can place it side by side.

In the purely neurotic cases of vaginismus, Dr. Matthews resorts to enlargement or distension of the vaginal orifice, although he knows of no treatment of decided use. He suggests as legitimate, an old operation which he thinks has not been sufficiently tried—cutting of the pudic nerve, in women suffering from intense vaginismus.

IPECACUANHA AS AN OXYTOCIC.

Dr. John H. Carriger, of Knoxville, Tenn., (*N. Y. Med. Jour.* November, 1878), claims oxytocic properties for this venerable old drug.

He gives two grains of pulverized ipecac two hours apart with the effect of increasing the expulsive efforts of the uterus. He quotes from many of the respectable old therapeutic shelf-keepers to show the power of ipecac in uterine hemorrhage. We hope this will prove a genuine discovery, and the case is very hopeful for the reason that our most precise practical results in therapeutics in the last twenty years, have been the restoration and readaptation of old drugs to new purposes.

* * * “In a very large number of cases of rigid and undilated os, where every pain, for hours previously to its administration, had been accompanied by loud outcries, and jactitation, and irritability of temper, it has rarely failed in a few minutes to bring quiet and comfort, speedily dilatation of the rigid os, and regularly recurring and forcible expulsive pains, an entire change in the character of the labor, and speedy termination.”

TREATMENT OF THE PYREXIA OF PHTHISIS.

Amongst numerous contributions to the treatment of phthisis, analyzed in Dr. Dobell's "Reports on Diseases of the Chest," vol. iii., *Medical Times and Gazette*, we have collected the following means of combating the febrile state. With this object Dr. R. Bartholow gives atropia. Against troublesome cough morphia may be combined with atropia; and in the case of vomiting, strychnia may be given in the same prescription. In this country Dr. McCall Anderson combats the sweating with subcutaneous injections of atropia; and the high temperature with the internal use of quinine, digitalis, and opium, conjoined with the use of iced cloths. Against the sweats Dr. Fothergill also prescribes belladonna, by itself or combined with opium. In some cases, however, this physician prefers oxide of zinc with hyoscyamus; and Dr. Hayden holds Dover's powder a better anhydrotic than belladonna. Observing that in advanced phthisis hectic depends on purulent absorption, Dr. Douglas Powell has prescribed sodic salicylate. The antiseptic treatment of phthisis is also in favor in Germany, where Dr. J. Schnitzler and Dr. J. Hirschfelder have succeeded in reducing the fever and the sweats by means of hypodermic injections of hydric-carbolate. In Italy, Dr. Antonio Lombardo assigns the following effects to the treatment of phthisis with *Silphium cyrenaicum*:—The expectoration is much facilitated; the dyspnæa is diminished, and the circulation becomes more regular; while no digestive disturbance results from its administration.

The silphium above mentioned is a European species.

CONTAGIOUSNESS OF CONSUMPTION.

Dr. Holden, of Newark, N. J., in an article in July number of the *Amer. Jour. of Med. Sciences*, concludes on the above subject thus:

"1. The general experience we have drawn upon favors such belief. 2. Most authorities, even among the non-believers in infection, concede such dangers from intimate contact. 3. Such a theory harmonizes, as no other can, the opinions of careful observers. To epitomize concisely, therefore, we believe that consumption is communicable in its latter stages by means of solid, excrementitious matter thrown off by the skin and deposited on the bedding and under-clothing, or in any other manner, brought into contact with the naked surface of a healthy body; and that, although this may in some instances be thrown off without development into new disease, it is yet very liable to be so developed, and more liable where the healthy person is by heredity or depression in a favorable state for its reception; and finally that the idea of infection or communication by the atmosphere is not sustained, and is rare, even if it is possible."

TELEGASTROGRAPH.

“Our contemporary, the *Morning Post*, is responsible for the following:—“The *Saturday Review* once declared that the greatest benefactor of the human species would be he who could enable men to drink an unlimited quantity of wine without getting drunk. Such a man has been found. Dr. Bell invented the telephone, but its wonders pale before the telegastrograph. This is an electrical machine by which the palate can be tickled and pleased by any flavor, and for any length of time, without fear of indigestion or inebriety. By putting fish, or soup, or wine, into a receptacle connected with a powerful battery, the taste of the daintiest viands can be conveyed along a telegraph wire for miles, and to an unlimited number of *bons-vivants*. They have only to put the wire in their mouths, and they seem to be eating and drinking. They may get drunk or over-fed; but the moment the contact is broken the evil effects pass off, and nothing remains but ‘a delightful exhilaration.’ The inventor, however, keeps the *modus operandi* a perfect secret, and wishes to perfect his discovery before he discloses it to the world.”—*Med. Times and Gazette*, August 31.

PHTHISIS TREATED BY SILPHIUM.

Dr. Laburthe reports the case of a young man in the second stage of phthisis, who recovered under the use of silphium. The history of tuberculosis was complete; the physical signs consisted in dullness, pectoriloquy, and abundant subcrepitant râles at the apex of the right lung. At first, six drops of the tincture of silphium were given daily, but the quantity was subsequently increased to twenty drops. At the same time cod liver oil was administered and iodine applied externally; when required, opium was given to quiet the cough and atropine to combat the night sweats. After four months of this treatment the stethoscopic signs had completely disappeared, the respiratory murmur had become normal on both sides, and the patient had gained nine pounds in weight. The improvement has since proved permanent. Although in this case other measures of treatment were employed as adjuvants, Dr. Laburthe believes that the cure must be ascribed mainly to the silphium. He has often employed the drug in his practice, and generally with advantage. It is most useful in cases of phthisis that follow a slow course and are not attended by much hectic.—*Le Progrès Medical*.

Several species of *silphium* grows in the sandy, open woods in North Carolina, and other States, and are easily recognized by their tall flower stalk (3 to 6 feet high in some species) shooting up from the centre of a whorl of leaves, (6 to 12 inches long in some species)

with large heads of yellow flowers. The leaves and all parts of the plants have a resinous feel and odor, and have long enjoyed a local reputation in the cure of asthma.—[EDS. JOURNAL.]

THE TREATMENT OF COLIC IN HORSES BY THE HYPODERMIC INJECTION OF CHLOROFORM.

Dr. Morgan W. Ayres, of Montclair Heights, N. J., writes: "It may be of interest to the medical profession should their attention be called to the application of hypodermic injection of medicines in the treatment of disease in the lower animals to know that cases often occur requiring prompt and effective measures. It is well-known that the horse is subject to attacks of colic, arising from numerous causes, and quick relief from the exhausting trouble is the only safe method of freeing him from danger. In the works on veterinary practice, the remedies prescribed are bulky, difficult of administration by a person alone, and moreover, taking a longer time to produce an effect that is desirable or safe to wait. In my own experience, I have found the hypodermic use of chloroform to be effective, swift in operation, and the after-effects less debilitating than the usual practice of 'drenches of turpentine, aloes, and opium.' I have used 20 minims of chloroform, followed by a similar dose in half an hour if the symptoms do not abate in intensity. I place the needle deep in the muscle, perpendicular to the surface, and have had no trouble following at the point of insertion. The dose is small in quantity, relatively, to the capacity of the horse, and I would not hesitate to use larger quantities till I produced the desired effect."—*Medical Record*.

CARBOLIC ACID INJECTIONS IN ERYSIPELAS.

Professor Heuter, of Griefswald, recommended injections of carbolic acid for the cure of erysipelas, in 1874. The strength of the acid injected is a three per cent. solution prepared as follows: Carbolic acid, dilute alcohol, of each 1.5 grammes (about 20 grains) distilled water about 20 grammes (about 5½ ounces). If erysipelas is recognized in its incipency when its area is small, it can be controlled easily, as at this time fewer injections are necessary, and the risk of carbolic acid poisoning is lessened. As many as twelve simultaneous injections have so far been ventured upon.

If this erysipelas is of traumatic origin a solution of five to eight per cent. of chloride of zinc is swabbed over the surface. The injections of carbolic acid of the strength mentioned are employed to the extent of two or three syringefuls. The canula may be left in when it is necessary to inject a second time in the same place. The wound is then wrapped in carbolized cotton, which is changed two or three times a day. The average duration of erysipelas treated by this method six days and nine-tenths.

Total Extirpation of the Uterus.—This most hazardous operation has recently been performed twice by Professor Friend, of Breslau, for carcinoma. The antiseptic method was “strictly followed, except that the spray was not allowed to enter the abdominal cavity.” Dr. Frankel who reports one of the cases says that a half per cent. solution of carbolic acid is as effectual as a two per cent. solution and does not irritate the peritoneum as much, and is pleasanter to the operator’s hands.

These two cases have succeeded, thanks, probably, to Lister’s method (*Med. Times and Gazette*, Oct. 19th), and Dr. Frankel thinks that by this method we shall be able “safely to remove malignant tumors of the fundus—sarcomata and cancers—and subserous and interstitial fibroids.”

Passage of Quinia through the System.—J. Persons in *Journal de Pharmacie et de Chimie* deny the assertion of other observers who hold that quinine is eliminated from the urine in a modified form. He ascribes the formation of the substances described as due to the process of extracting it from the urine. His investigation led him to the following results :

1. A large quantity of the quinia taken internally is destroyed during the passage through the organism.

2. Whatever is passed out through the urine is unaltered quinia.
—*New Remedies.*

Carbolic Acid Injections in Hæmorrhoids.—As from a rational point of view it at first seemed, carbolic acid as an injection in hæmorrhoidal tumors has been fulfilling some of the grave predictions made of it, that it would be a dangerous proceeding in the larger tumors. The greatest of these dangers would be in sending coagula into the blood-stream, and hardly a less important one, inflammation resulting in gangrene. Its proper place as a remedy seems to be, in its employment for the smaller tumors, for which, however, the ligature would do as well, while for the larger tumors removed by Erichsen’s ligature or reduction by carbolic or nitric acid topically applied. We are afraid that the brilliant success in some cases of carbolic acid injection, is leading some practitioners into dangerous grounds.

Chew Jackson’s Best Sweet Navy Tobacco.

BOOKS AND PERIODICALS RECEIVED.

Mr. Henry C. Lea, of Philadelphia, has the following important works in preparation for early publication :

I. *The National Dispensatory.* By Alfred Stille, M. D., LL. D., and John M. Maisch, Ph. D., Prof. of Mat. Med. and Bot. in the Phil. Col. of Pharmacy. With 205 illustrations. In one handsome octavo volume of 1400 pages.

II. *Clinical Manual for the Study of Medical Cases.* By Jas. Finlayson, M. D., Phys. and Lect. on Clin. Med. in the Glasgow, Western Infir., etc. In one handsome 12mo. vol. of about 500 pp., with 85 illustrations.

III. *The Principles and Practice of Surgery.* By John Ashhurst, Jr., M. D., Prof. of Clin. Surg., Univ. of Pa.; Surgeon to the Episc. Hosp. Phila. Second and Revised Edition. In one large and handsome 8vo. vol. of about 1000 pages, with about 550 illustrations.

IV. *The Principles and Practice of Gynæcology.* By Thomas Addis Emmet, M. D. In one handsome octavo volume of over 800 pages, with numerous illustrations.

V. *The Practice of Surgery.* By Thomas Bryant, F. R. C. S., In one octavo volume of over 1000 pages, with about Six Hundred Engravings on wood.

VI. *A System of Human Anatomy: Including its Medical and Surgical Relations.* By Harrison Allen, M. D., Prof. of Physiology in the Univ. of Pa.

VII. *Manual of Pathological Histology.* By V. Cornil, Prof. in the Faculty of Medicine, Paris, and L. Ranvier, Prof. in the College of France. Translated, with Notes and Additions, by E. O. Shakespeare, M. D., Pathologist and Ophthalmic Surgeon in Philadelphia Hospital.

Report of Operations on One Hundred and Thirty Cases of Strabismus. By A. W. Calhoun, M. D., Professor of Diseases of Eye and Ear, in the Atlanta Medical College. Reprint from Trans. Med. Society, Ga.

Address before the American Medical Association. By T. G. Richardson, M. D., of New Orleans. President of the Association, June 4th to 7th, 1878. Reprint from Transactions of American Medical Association.

A Conspectus of the Different Forms of Phthisis. By Roswell Park, A. M., M. D. From Chicago Medical Journal and Examiner, 1878.

Pocket Therapeutics and Dose Book. By Moses Stewart, Jr., B. A., M. D. Detroit, Mich. Emil Schober, 1878. Price 50 cts.

Medical Journal Advertising Bureau Gazetter, Vol. 1, No. 1, Published Quarterly. C. W. Bernacki, M. D., Editor and Publisher. This journal gives the list of Medical Journals in the country, and proposes to give the circulation of each when the editor finds it out himself.

The Physician's Pocket Day Book. By C. Henri Leonard. M. A., M. D., Price \$1 00. Send for stamp for sample sheets of this very good visiting list. Small accounts can be kept compactly, so as to be seen at a glance, and in many other respects it deserves favorable consideration. It will answer for any year. Address, C. H. Leonard, Detroit, Mich.

Physician's Visiting List, Lindsay & Blakiston, 25 S. 6th Street. Philadelphia, Pa. Price \$1 00. This visiting list has been before the public so long that it needs not a word of commendation. It saves confusion and loss of money to keep up with your practice after so useful a plan as contained in it.

Notes on the Treatment of Skin Diseases. By Robert Liveing, A. M., and M. D. Cantob, F. R. C. P., London. 16mo, 127 pages. Fourth edition. Wm. Wood & Co., 27 Great Jones Street, N. Y. This hand-book of skin diseases will be acceptable to the general practitioner as instructor and remembrancer. It is impossible to condense diagnosis in so narrow a compass, but for many reasons this work will be an aid thereto. Price \$1 00.

Rest and Pain: the influence of mechanical and physiological rest in the treatment of accidents and surgical diseases, and the Diagnostic value of Pain. By Jno. Hilton, F. R. S., F. R. C. S., Edited by W. H. Jacobson, F. R. C. S. 300 pp. 8vo. Wm. Wood & Co., 27 Great Jones St., New York.

Transactions of the Medical Society of the State of Pennsylvania at its Twenty-Eighth Annual Session. Held at Pittsburgh, May, 1878. Published by the Society. 1878.

Berberidacæ: The Botanical Description, Commercial History, Medical Properties and Pharmaceutical Preparation. By C. G. and J. U. Lloyd. Cincinnati. 1878.

The Local Treatment of Eczema. By Henry G. Piffard, M. D., Prof. Dermatology. Univ. of New York. Reprint from Medical Record, Oct., 1878.

Illustrierte Vierteljahrschrift der ärztlichen Polytechnik. Dr. G. Beck, November, 1878.

The Law Governing Sex. Professor Thomas Meehan. Verbal communication to Academy of Natural Sciences of Philadelphia. June 4th, 1878.

The Southern Clinic. (Vol. 1, Nos. 1 and 2). Edited by C. A. Bryce, M. D., and J. R. Wheat, M. D. A monthly Journal of 28 pages, published in Richmond, Va., at \$1 50 a year. Richmond has now two Medical Journals, whereas formerly it could not sustain one, until Edwards demonstrated it.

Medical and Surgical Brief. (Vol. 1, No. 1). New York. A well printed monthly, with short articles, well selected. \$3 00 a year to new subscribers.

Pocket Therapeutics and Dose Book, etc., etc. By Morse Stewart, Jr., B. A., M. D. The frequent misprints and mistakes in that little work mar it so much, that the object of the book is defeated.

DUPLIN COUNTY BOARD OF HEALTH.

The Board of Health for Duplin County met at Kenansville, November 19th, President J. W. Blount, M. D., in the chair.

The annual election of officers for the ensuing year was held, which resulted as follows :

President.—Henry W. Faison, M. D., of Faison.

Vice-President.—J. W. Hill, M. D., of Warsaw.

Treasurer.—A. J. Jones, M. D., of Kenansville.

Secretary.—V. U. Seawell, M. D., of Wallace.

Special Essayist.—J. D. Roberts, M. D., of Magnolia.

Time of next meeting, first Monday in March, 1879.

WOOD'S LIBRARY OF STANDARD MEDICAL AUTHORS.

Messrs. Wm. Wood & Co., have undertaken to reproduce valuable medical works at a price far below the cost of the English editions. Estimating from the regular prices of the books so far selected for publication in 1879, subscribers to this library will obtain about FIFTY DOLLARS WORTH OF MEDICAL BOOKS for \$2 00. These books will be printed on handsome cream laid paper, with broad-faced long primer type. Wood engravings and plates will be freely used whenever required. They are sold by subscription alone, and comprise the following works :

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“*Diseases of Children*,” with a formulary by Edward Ellis, M. D.

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Four other volumes in addition to the above to be announced hereafter.

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AMERICAN PUBLIC HEALTH ASSOCIATION.

We have time at the last minute to say only a few words about this great national meeting. Its work has been important enough we believe, to mark an era of substantial progress in public sanitation. If it had been possible in so short a time to have reconciled all the conflicting views of the learned gentlemen present upon the origin and treatment of yellow fever, it would have been a small matter, as compared with the impetus which has been given to the executive officers of State Boards of Health; and reflexively, the States they represent in the prosecution of preventive medicine. Fifteen out of the existing sixteen State Boards were represented, and the prospect is that the next year will be organized a uniform national system for the prosecution of public health matters.

On the last day the following officers were elected :

Professor James L. Cabell, M. D., Virginia, President.

Surgeon J. S. Billings, M. D., Washington, D. C., First Vice President.

Professor Samuel Choppin, M. D., New Orleans, 2nd Vice President.

Dr. Henry B. Baker, Lansing, Michigan, Treasurer.

The present Secretary, Dr. Janes, completes his unexpired term.

The following resolutions, resulting from a conference of State Boards of Health with the Executive Committee, were adopted :

STATE BOARDS OF HEALTH.

Resolved, That in the deliberate judgment of this Association it is the duty of every State to establish and adequately maintain an

efficient State Board of Health, and in as great an extent as practicable to contribute to the protection of the public health within its own Commonwealth, and by all suitable means to that of the whole country.

2. *Resolved*, That the powers and duties of the State Boards of Health should be so well defined by law and so fully provided for in the polity of State administration that the sanitary interests and protection of all places in the country should be secured.

3. *Resolved*, That a copy of these resolutions, together with a suitable official memorandum, as a basis of correspondence, shall be transmitted to each State Board of Health and Governor in our country, to the health-officers of ports, and to the government of each State and port that may be concerned in the duties of such mutual efforts for sanitary protection.

We are indebted to the *Richmond Dispatch* for the following, the propositions adopted by the Association after discussion :

THE PROPOSITIONS.

The Association—Professor Cabell in the chair—proceeded to consider the proposition submitted at the morning session by Dr. Billings's committee, as follows :

1. Yellow fever is a specific disease, not indigenous to or originating spontaneously in the United States, and its appearance in this country is always due to a specific cause.

2. Quarantine established with such rigor and precision as to produce absolute non-intercourse will prevent the importation of the specific cause of yellow fever.

3. It is the duty of the General Government to aid in the establishment as a practical and proper quarantine by all means in its power.

4. It is the duty of the General Government to appoint a commission of experts to make a thorough investigation into the causes of yellow fever, and the best methods of preventing its introduction into this country, and to make such an appropriation as will permit of securing the services of the best men, and of the best means for carrying out such investigation.

5. That it is the duty of the General Government to invite foreign nations to coöperate with it in the establishment of uniform and effective international quarantine regulations.

6. That whatever may be the practical value of quarantine, there is no doubt of the importance and value of internal sanitary

measures in the prevention of modification of epidemic yellow fever, and this Association strongly urges upon State and municipal authorities the great amount of responsibility which rests upon them on this account at times when no disease is prevalent or threatening.

Proposition *one* was amended, on motion of Dr. Gihon, so as to read, as follows, and adopted (ayes, 33 ; noes, 11) :

1. Yellow fever of 1878 was a specific disease, not indigenous to or originating during that year spontaneously in the United States, and its appearance in this country was due to a specific cause.

All the other propositions were then adopted, though to two or three of them there was some objection made.

* * * * * * *

The following committees were announced :

To Petition Congress to Publish the Catalogue of the Library Collected by the Surgeon-General :—Doctors R. W. Mitchell, Tennessee ; H. I. Bowditch, Massachusetts ; S. M. Bemiss, Louisiana ; Wirt Johnson, Mississippi ; and H. B. Baker, Michigan.

Committee of Council to Executive Committee on National Legislation :—Drs. Webb, of Alabama ; Gibbon, California ; Wall, Florida ; Thomas, Georgia ; Rauch, Illinois ; Sutton, Indiana ; Johnson, Mississippi ; Steiner, Maryland ; Bowditch, Massachusetts ; Taylor, Pennsylvania ; Minor, Ohio ; Hogden, Mississippi ; Snow, Rhode Island ; Atchison, Tennessee ; Joynes, Virginia ; Hitchcock, Michigan ; Reeves, West Virginia ; Toner, Washington ; Eaton, New York ; Lebby, South Carolina ; Wood, North Carolina ; Chamberlain, Connecticut ; Conn, New Hampshire ; Hollott, Vermont ; Kirkpatrick, Texas ; Griffin, Wisconsin ; Hand, Mississippi ; Lilly, New Jersey ; McFarlan, United States Army ; Gihon, United States Navy ; and Hebersmith, United States Marine Hospital.

We hope to give a complete account of this important meeting so soon as the results can be more justly estimated.

NORTH CAROLINA MEDICAL JOURNAL.

M. J. DeROSSET, M. D.,
THOMAS F. WOOD, M. D., } Editors.

Number 6. Wilmington, December, 1878. Vol. 2.

ORIGINAL COMMUNICATIONS.

BLINDNESS INDUCED BY THE USE OF TOBACCO AND HOW TO PREVENT IT.

By JULIAN J. CHISOLM, M. D., Baltimore, Md.

Professor of Eye and Ear Diseases in the University of Maryland.

Surgeon in charge to the Baltimore Eye and Ear Institute.

Surgeon to the Presbyterian Eye and Ear Charity Hospital, &c., &c.

A Paper read before the Baltimore Academy of Medicine.

The views expressed in this paper are derived from the study of thirty-five cases of tobacco amaurosis occurring in my practice during the past eight years. They represent in my personal experience the proportion of such cases out of 13,723 individuals who were treated by me for affections of the eye, during that period. This unusually large percentage, so much greater than falls to the lot of those specialists who have published their experiences, can be explained by the universal habit of smoking found in the Southern States from which my practice is drawn, when contrasted with those living farther north and west than Maryland. Also that these

people live in the States of Virginia, Maryland, North Carolina and Kentucky, the tobacco growing States where tobacco is so cheap that the substitutes of beet leaves and other vegetable matters so generously used in Europe and sold by thousands of tons under the name of tobacco, is unknown. This special people are therefore more exposed to nicotine poisoning than those of any other locality and we would expect to find the symptoms of such poisoning if this narcotic possesses any injurious effects upon those who are so constantly inhaling it.

Notwithstanding the doubts in the minds of some concerning the poisonous effects of tobacco upon the human system, there can be no question that the observant specialist in eye, ear and throat diseases, sees many cases of defective vision and hearing which can be traced to no other cause. After the long use of tobacco by some of these persons, their sight becomes slowly, painlessly, steadily cloudy; a smokiness not explainable by the approach of age. When this poison commences to act upon the visual organ all surrounding objects are seemingly befogged. Not only is the street full of thin smoke, but the room is also veiled in a mist, both distant and near objects being somewhat obscured. Nothing is sharply defined to such an eye. Small letters fade entirely from view and only large print can be made out.

The first suggestion to persons poisoned in this way by tobacco is to try glasses, and the aid of the optician is sought. Glass after glass is put on in vain; none remedy the defect. If the individual has already used spectacles he naturally accuses these of causing his trouble, but no other glasses remove the cloud to any greater extent than the spectacles which had previously given him such very clear sight. He then seeks medical advice. His physician knowing the weakness of humanity and the longing for some tangible cause for the defective eye-sight, suggests a bilious disorder, and locating it either in the stomach or the liver, offers comfort in dyspeptic remedies or in liver pills. Purgative action he can bring about; even an appetite can plainly be called up at will, but that everlasting smoke will not get out of the sight. Month by month his vision seems to get more cloudy and increases his anxiety. His first sacrifice is to abandon pleasure night reading; even the newspapers soon follow, and finally, to a great extent, business, as he

can no longer decipher his correspondence. If the cause is not yet suspected, his mental worry and his daily medication with no evidences of improvement do him no good; while idle hours and desire to soothe his restlessness by much smoking augments the trouble of vision. The mist thickens with the accumulating poison in his system. In the course of time even larger objects can not be defined, and blindness slowly but surely creeps on, until in very extreme cases sight may be reduced to the mere appreciation of light.

While the power of vision has been steadily declining, the eye-ball has at no time lost any of its natural brightness. It will compare favorably with any healthy eye, and in this connection each portion of the visual organ will bear the sharpest scrutiny. The eye has been at no time congested. The cornea is clear, the pupil acts well, no pain nor grittiness has been at any time induced by attempt to use the organ, so that an outside examination reveals absolutely nothing to explain the increasing defect in vision. The skilful use of the ophthalmoscope in recent cases to inspect the interior of the eye-ball brings to light no pathological lesion. The contents of the eye chamber seem in every respect normal. The media are perfectly healthy, the lens as clear as crystal, no clouding can be observed in the aqueous or vitreous fluids, the choroid and retina give their regular healthy reflex. While the examination, however carefully made, of an eye in which the sight is quite misty, reveals absolutely nothing, *the very absence of physical signs indicates a nerve poisoning*, a diminution in the sensitiveness of the nervous structures, with as yet no tangible change in the physical condition of either retina or optic nerve which the observer can detect.

Otherwise every case of defective vision has its appreciable cause which a careful examination of the eye will bring to light. Corneal and pupillary change, which obscure vision are inflammatory in their nature, and so conspicuous are the physical changes induced in these coats by inflammation that they can be detected often at a glance. Should the lens be the seat of clouding, it at first effects only distant objects and the reflected light of an ophthalmoscopic mirror will, with certainty, show the presence of the clouding. If the trouble be in the vitreous body the ophthalmoscope will un-

doubtedly reveal it. No pathological inflammatory changes in the retina choroid or optic nerve, which can in any way cause a deterioration of vision, could escape the careful examination of one skilled in the manipulation of the exploring instrument now used. This is equally true of the latter stage of tobacco poisoning. In such eyes the ophthalmoscope will exhibit a white optic nerve an indication of white atrophy or loss of power by shrinkage of blood-vessels, a slow but very effectual starvation of the very important structure :* *but in the early stage of tobacco amaurosis the interior of the eye may be accepted as a typical healthy picture.*

When in a person from 30 to 60 years of age, with sight failing for a few months, with a steadily increasing, painless, clouding of vision in both eyes, which spectacles cannot correct, and in which case a careful examination of the eye-ball from within and from without, exhibits no appreciable disease, the diagnosis of tobacco-poisoning may be safely suspected. In the majority of cases this diagnosis will be proved correct.

There are only two other classes of patients in whom the absence of diseased conditions is found simultaneously with defective sight. In the long disease of one eye in young persons from the impossibility of concentrating light upon the retina, through defective refraction, a condition often connected with squint, the weak eye ophthalmoscopically will be identical in appearance with the one in constant use. The same negative condition is now and then seen in one of the eyes of a young hysterical woman in whom disturbed menstruation may exhibit some irregularity of vision, without causing any appreciable change in the appearances of the internal coats of the eye. These exceptions are found, however, only in the young and usually one eye alone is involved.

Tobacco poisoning is chiefly found in men, is very seldom met with before the age of 30, and both eyes are always equally clouded for vision, although the media and inner coats are to all appearances perfectly healthy, the patient cannot see small objects in any position that he may hold them. Spectacles will not sharpen vision, as it so constantly will do for the mist induced by defective refraction or deficiencies in condensing light upon the retina.

*In my individual experience, judging from the case occurring in my practice, tobacco amaurosis forms $\frac{1}{4}$ of the cases of amaurosis coming under my observation.

Although I have said that tobacco poisoning is chiefly found in men it has also been detected in women. Not long since a patient (female) from a neighboring state applied at the Baltimore Eye and Ear Institute for treatment. Although the general health was perfect, she found her eyesight failing her. It had become so defective as to debar her from all useful employments. She could neither read, write nor sew. She had never had a serious attack of sickness in her life, and had neither stomach nor uterine troubles and was free from headaches. She was forty years of age and although this marked the period when spectacles are often required to clear up the definition of small objects at short distances, she had exhausted the entire list of glasses in vain efforts to improve her vision. Her family physician had called the disease amaurosis and had put her through a course of mercury, which was followed by tonics with blisters, and had suggested a neck seton. Notwithstanding this varied treatment her vision both for near and distant objects was becoming more misty. With gloomy forebodings of approaching blindness she came to Baltimore for treatment. I gave her a thorough examination both subjectively and objectively, but could detect nothing to explain her visual defect. To all appearances her eyes were perfect and the ophthalmoscope after a most careful search gave no evidences of disease in any of the contents of the eye ball, still she could see or read at no point with the optometer. In my dilemma and in deep thought over her inability to make out the coarser print of Jaegers Test Types, I remarked to her if she were a man I would turn to tobacco poisoning for a solution of the mystery. To my great surprise, she said, Doctor, I do use tobacco! and have used it for years. My husband and myself live alone on a farm. We have no children. He is an inveterate smoker and has taught me to smoke also, so that we constantly light our pipes together for company in the long winter evenings. In her case, giving up tobacco and by the use of strychnia soon restored her to clear vision.

The amount of tobacco necessary for producing this clouding of the sight, and the length of time required by the constant use of tobacco before the trouble shows itself, are very unstable factors. I have, but in one small case, seen defective sight induced by excessive chewing of tobacco, the poisoning comes far more commonly from

smoking. I have never noticed the peculiar disease recognized as tobacco amaurosis under less than ten years use of the weed ; and I have had patients who smoked incessantly for forty years before the symptoms of eye poisoning became conspicuous ; an indication of the very slow changes induced in nerve tissues by the long continued and every day use of the narcotic. An explanation for this very slow action has not yet been given.

As to the quantity of tobacco necessary to cause paresis of the optic nerve there seems to be no fixed amount. I have known men poisoned by one single segar a day, and I have known others smoke thirty segars a day with impunity. A friend of mine, a wealthy planter in former times, made it a rule to put a bunch of strong Havana segars on his dining room mantel-piece every night of his life, for his next day's smoking. He had been indulging this passion for thirty years when I visited his Carolina country home, and saw him put out nightly a new bunch containing twenty-five segars. As far as he knew himself, no discomfort had ever arisen from this excessive use of tobacco. I have a wealthy batchelor friend, who belongs to the great army of smokers. He is seldom without a segar in his mouth. Before dressing in the morning, and after he goes to bed at night he is still smoking. He is now seventy-two, and he has been smoking since he was sixteen years of age. He considers tobacco the solace of his life, and a segar the best friend he has. He passes the entire day in smoking and reading, having, with his spectacles, perfect eyesight.

On the other hand, I have had a patient, who, at the age of 30, exhibited decided symptoms of tobacco amaurosis from the use of a single segar a day. His defective vision, which no form of spectacles could arrest, yielded to no course of treatment, however stimulating, until this single daily segar was stopped, in a very short time his sight commenced to improve and in a few weeks after stopping the use of tobacco his vision was completely and permanently restored. The physician who had previously treated this patient for his misty vision had never suspected the segar. Finding no appreciable cause for his defective sight, after a thorough examination of his eyes, and with a suspicion in my mind of tobacco poisoning I was surprised upon close questioning to learn that he never exceeded one segar a day. However, I nailed the cause of

his disease upon the right party by this very pertinent question. Do you ever feel after smoking as you would have best left that part of your daily programme undone? He said that thought had often occurred to him. "I light my segar with the most delightful anticipations, but often throw it away before I have used half of it. My friends seem to enjoy their segars so much, and the first whiffs are so pleasant to me, that in my desire to smoke as others do, I have taken my daily segar as a matter of principle. Sometimes even a half of a segar makes me feel so uncomfortable, that I have to lie down. On this account I now only smoke in the evening when my day's work is over."

Only a few days since I was consulted by a patient 57 years of age, whose vision had become so very defective that he could only make out the heads of newspapers, by aid of his spectacles which had been properly selected. An ophthalmoscopic examination in his case exhibited progressive white atrophy of the optic nerve in each eye. When informed that I suspected tobacco as the cause of his trouble, he readily assented to the proposition with the statement that for the last thirty years he had taken twenty drinks a day and had smoked twenty segars.

In this connection I would say that although the abuse of alcoholic liquids is one of the prevalent vices in the United States, I have very seldom found a case of amaurosis which I could directly trace to alcohol alone. In Europe and especially in England I know that alcoholic amaurosis is one of the recognized common affections of the sight nerves. Those who drink much in America are really without exception, smokers, but I have found in a great many cases, rapidly increasing dullness of sight in persons who used tobacco *but who did not partake of any alcoholic beverage whatsoever.*

In evidence of this poisonous influence of tobacco threatening blindness, when there is no apparent pathological lesion in explanation of the defect in sight, the growing fog will yield to no formal medical treatment unless the tobacco habit be absolutely given up. Then and only then, the cause being removed by stopping the daily dose of the poison, a decided and rapid improvement will take place to the complete recovery of the patient, provided the deterioration had not eventuated in decided white atrophy of the optic nerve with

consequent deterioration in the retina. *This most desirable result will often be secured even without medicines, simply by stopping the use of the poison.*

In all such cases it will not do to taper off in the use of tobacco. The rejection of the narcotic must be absolute and at once. It is a very hard struggle with many, but when the poisonous nature of the indulgence is fully understood and the value of the organ in jeopardy recognized, blindness with tobacco, or sight without it, the determination is soon taken. While the struggle is still going on, and before the longing for the accustomed cigar has been overcome, the rapid improvement in the sight indicates the wisdom of the choice and confirms the good resolution of abstinence. When the daily poisoning has been stopped, the inherent resiliency in the nerve structures to throw off these deleterious impressions seems marked, and many cases will completely recover if left to themselves after the tobacco has been thrown aside. The restoration of sensitiveness to the nerve of sight can, however, be hastened by the judicious use of stimuli, among which I have found strychnine the best, and next in order electricity. *These remedies so valuable when the use of tobacco has been stopped, are utterly useless if the smoking habit be continued.*

Many years since, in the treatment of tobacco amaurosis, I deemed it necessary to use strychnia by hypodermic injection. A larger experience in the administration of this valuable agent both by the skin and by the mouth, *indicates no advantage for the former method*, and for several years I have abandoned the injection of it under the skin. Believing that the action of strychnia was upon the central organs of innervation, and that whether thrown into the subcutaneous connective tissue or into the stomach, it must be equally absorbed into the circulation and taken to the heart before it could reach the nerve centres. I experimented extensively with alterative doses from the same bottle, using at one time the hypodermic injection, and at the next, the mouth administration, of the same number of minims. The only difference that I found by my experiments was that from the injection I would obtain the physiological effects in a minute or two, while from the stomach dose the symptoms of strychnia would not show themselves for several minutes. With the exception of rapidity of action the degree of ex-

citement and the deviation of the stimulation appeared to be identical in each of the experiments.

To secure the most rapid improvement in vision from strychnia, I found that the system had to be kept *constantly* under the peculiar excitation of this drug. The dose therefore had to be administered three times a day to keep up this impression for the twenty-four hours. *Strychnia is not a remedy to be administered for its moral effect*, and as it cannot act directly upon the tissues at fault, no advantage can possibly be gained, as far as the optic nerve is concerned by throwing it into the temple, where a set of vessels which have nothing to do with the eye in the socket or with the brain, must first absorb the strychnia and then carry it to the centre of the circulation for a new distribution. Much can be said derogatory of the hypodermic use of tonics and nothing in their favor. This hypodermic use of strychnia is painful to many, even when thrown into the arm, and especially when injected into the temple, a part of the body so richly supplied by sensitiveness. The operation of injection should always necessitate the presence of the surgeon, and is not a pleasant anticipation for a nervous person to contemplate three times every day for some weeks or months.

For many years past I have used the strychnia in granules sugar coated, with excellent results. Strychnia is, as we all know, one of the most disagreeable of bitter substances, leaving its impression upon the tongue for hours. By using the sugar coated granules, we can protect the patient from this annoyance, and we can also guard against the taking of an over-dose of a most active agent, which the unequal spoonful dose may easily lead to. After experimenting very extensively with sugar coated granules, and with solutions of strychnia of known strength, I found no difference in the physiological effects in either preparation, if put up by careful pharmacists.

In the use of strychnia, I now prescribe as a minimum dose for an adult 1-20th of a grain. For many years I have used no smaller dose than the above to a grown person, and this dose I always prescribe to be taken, after eating, three times a day. When mingled with food in the stomach its absorption is slower, and although its effects are equally beneficial as when taken fasting they are less annoying. In giving this pill of 1-20th grain of strychnia, I usu-

ally order the first pill to be taken after breakfast. If no stiffening of the leg muscles is occasioned by it, a second is taken after dinner. Should this not disturb, a third is then administered after supper. Should any muscular stiffening be induced from any of the pills, no more should be taken on that day. On the following morning the pills are to be resumed. It is very rarely that I find a 1-20th of a grain three times a day not well borne from the first day of its administration. In four or five days I commence to double the dose by administering two pills after breakfast, one after dinner, and one after supper, making four pills on the fourth day. If no discomfort from these arise, then the breakfast and dinner pills are doubled on the fifth day. On the sixth day two pills can usually be taken after each meal. Six pills a day is as much as some patients can take, and the two pills after each meal or 1-10th grain of strychnine at a dose will be for them the maximum quantity. With the majority of adults the 1-10th grain will cease to excite in a very few days when a third pill may be cautiously added to each dose. At the end of another week four pills equal to 1-5th of a grain of strychnia can be taken at a dose after each meal. The system seems rapidly to habituate itself to even these very large doses.

From a very extended observation, I find that the same dose which, when taken after eating, produces no discomfort, owing to its slower absorption, will produce marked muscular stiffening if taken on an empty stomach. Therefore the prescription for strychnia is invariably written to be taken after eating. *I have also observed that the absorption of the drug is always much more rapid than its elimination from the circulation.* When taken into the stomach the full strength of the physiological action is usually experienced within a half hour after the administration, which shows that the entire amount has entered the circulation from the stomach. The kidney soon commences to eliminate the alkaloid. Within one hour the amount is sufficiently reduced in the system to remove the active cause of muscular contraction, but it is several hours before the entire amount which the vessels had absorbed has been altogether thrown out. By dinner time a little of it is still lingering in the circulation when the second dose is taken in and is added in full strength to this remnant. By supper time there may be still a trace

of the breakfast dose, some of the dinner pills, and to this is now added the full night dose. This accumulation is often more than the system can conveniently carry, and therefore it is a very common phenomenon to find the night dose produce uncomfortable contraction which neither the breakfast nor dinner pills had excited. By morning, the twelve hours of night has been a sufficiently long time to eliminate all the drug from the blood and a fresh start is made. With this experience I have found it best to give a smaller dose at supper time than after breakfast or dinner. My usual habit is to increase all the pills up to two at a dose, then slowly add the third and finally the fourth pill to the breakfast and dinner doses, leaving the supper dose two pills only. When taking the full quantity, the patient would therefore take 1-5th grain of strychnia or four pills of 1-20th each for breakfast; the same quantity after dinner and only two pills or 1-10th grain after supper, making $\frac{1}{2}$ grain of strychnia for twenty-four hours. These doses are kept up as long as any improvement is perceived or until sight is fully restored.

Sometimes the system rebels after tolerating the remedy for many days a diminished dose must then be used or the remedy must be suspended for a short period. In resuming the strychnia the small dose must be commenced with, but a more rapid increase can be made, as it is now known that no idiosyncrasy against strychnia exists in this patient. *In all cases it is desirable that the dose should daily exhibit some physiological action*, however slight this muscular contraction may be. The most rapid improvement in the sight accompanies this manifestation of strychnia action. Where no appreciable excitation is induced by any given dose there should be an augmentation of the amount of strychnia. In one of my cases the value of this suggestion was very strikingly shown. The patient with tobacco amaurosis had made steady improvement under increasing doses of strychnia and had reached the 1-5th grain dose with marked advantage. After a while the daily excitation of this amount was no longer experienced and the eye sight ceased to indicate any further progressive acuteness. After the arrest of improvement had been satisfactorily established by this observing patient 1-30th of a grain was added to the 1-5th dose. There was an immediate response both to the nervous excitation and to the sharp-

ening of sight, so that a fine type which could not have been read after the daily trial for two weeks, could be readily made out in two days under the increased dose.

In the strychnia treatment of tobacco amaurosis, my rule is to continue the strychnia as long as it improves the vision, however small the progress may be. One patient, aged 43, in whom the white atrophy had made some progress before he came under treatment, continued the strychnia for fully one year. He lived a distance of ninety-five miles from Baltimore and had got away from medical observation. At the end of the year, he wrote me to report his decided improvement, and states that he had taken during this period two hundred grains of sulphate of strychnia.

The rapidity with which the system habituates itself to those increasing doses from 1-20th to 1-5th of a grain of strychnia is an evidence that the commonly accepted dose of 1-60th to 1-30th of a grain with no increase, soon cease to be of any utility. The 1-30th of a grain injected hypodermically once a day or three times a week for the cure of amaurosis is only an imposition on the credulity of the patient, and a strong point to the credit of the *vis medicatrix naturæ* should any benefit accrue from the defective mode of administration.

DR. JAMES H. DICKSON'S SUBCUTANEOUS TENOTOMY FOR CLUB-FOOT.

In a recent lecture on club foot, by Dr. Joseph C. Hutchinson, of Brooklyn, we find the following note: "In this country, the tendo-Achillis was first divided according to the Stromeyerian method by the late Dr. James H. Dickson, of Wilmington, North Carolina, in 1835."

We believe this to be the first mention made of this item of the history of subcutaneous tenotomy, in any lecture delivered on the subject, although it was well known in his own State for thirty years. Dr. Dickson operated a large number of times with a success very little if any less than that now attained by his followers, notwithstanding the great advance made in the appliances for after treatment. It is to be regretted that no record of his cases has been preserved, that the comparison might be instituted.

COUNTRY CLINQUES.

II.—LARGE CALCULUS IN THE PROSTATIC AND MEMBRANOUS URETHRA.

BY A NORTH CAROLINA PHYSICIAN.

William L., æt. 38 years, was in the fall of 1864, sent from the field to the Confederate Hospital at Farmville, Va., suffering from hæmaturia and other symptoms of renal calculus. Several small calculi were discharged from the urethra, and after a month's detention in hospital he was returned to his regiment, and assigned to light duty. Symptoms of vesical catarrh persisted, and he experienced difficulty in voiding urine. There was little pain until 1866, when, as he thought, in consequence of the severe straining which now accompanied every effort at micturition, a sudden and severe pain was felt at the anus, radiating from this point even the inner surface of the thighs into the serotum, and along the urethra to the extremity of the penis.

In December, 1877, I first saw the patient. When I entered the room I thought he was dying. His features were livid and distorted, eyes sunken, skin cold and pallid, pulse too rapid and feeble to count, and respiration panting. After a few moments he rallied somewhat, and informed me that these symptoms had been caused by an effort to pass water. He complained of constant bearing down pain of an excruciating character at the anus, and at the points mentioned. The degree of endurance he had exhibited was surprising. Four weeks before I saw him, he had engaged in out-door work, and had that year made a respectable crop without assistance. By sheer force of will he had so far controlled the constant inclination, that he only passed water about every four hours. Now, the force of will was overcome, and the inclination was beyond his control. Except when excited by his agonizing sufferings, he was enabled to raise his head from the bed. The stomach would retain no food, even if appetite had been present. The bowels were constipated, and the ammoniacal urine consisted largely of mucus and pus. The quantity excreted appeared enormous, but could be only roughly estimated. For years it had contained no blood. The

point of the sound, had hardly passed under the pubic arch, before it came upon an obstruction, which gave the peculiar "click" of a calculus. The finger reached it immediately after entering the internal sphincter ani, but could not pass beyond it, on account of its great size.

Before the examination was finished, another paroxysm came on. The wretched man sprang from his bed, perspiration oozing from every pore, eyes starting from their sockets, nostrils dilated, teeth gnashing and chattering, and clutching penis and scrotum with the other to force back the widely opened and protruding bowel. With muscles spasmodically contracted, sometimes upon his head and heels, again upon his back or side, he writhed upon the floor in the most horrible contortions, while his groans and shrieks filled the air. In his frenzy he was utterly oblivious to his surroundings, and articles of furniture had to be moved out of his way to prevent him from injuring himself. This agonizing scene was protracted for some ten minutes, the urine meanwhile dribbling away, continued spurting out with considerable force. As soon as I could approach him I administered a grain of morphia hypodermically. This materially quieted his nerves and relieved his excessive prostration.

Inanition and protracted suffering had done their work, and this once—according to all accounts—Herculean specimen of manhood, had been reduced to a mere shadow of his former self. Exhausted alike in mind and body, he longed for death as the only relief from his sufferings; and on being made aware of the cause of his trouble, he could hardly be induced to excuse me from operating immediately, although I told him that an operation must necessarily be fatal in its issue. Finding myself unable to absolutely refuse his urgent prayer for an easy death, I promised that if he could be brought to my village, I would operate. To my surprise he made his appearance three days afterwards. He had traveled twenty miles upon a thick bed laid in an express wagon, and his condition appeared none the worse for his trip. Indeed the excitement and hope of relief had done him good. Since my visit, the constipation had been relieved by frequent injections of a few ounces of castor oil, and the stomach was able to retain small quantities of stimulants, milk, &c.

The second day after his arrival, patient was etherized, and the ordinary plan of left lateral lithotomy was attempted. Beyond the first incision, however, the operation more resembled in its details the pre-rectal than the lateral method. The staff inclined to pass behind the calculus, and in attempting to cut upon it, great care had to be exercised to avoid wounding the bowel. The urethra was, therefore, only slightly opened, first behind the bulb, and the staff being withdrawn, this opening was enlarged posteriorly and to each side, by using the stone itself as a guide to the knife. Despite the greatest dilation and incision of surrounding parts, it was found impossible to remove the calculus entire. Fortunately it proved friable, and after being crushed with strong forceps, it was removed piece-meal. Little, if any, laceration resulted from this procedure, the stone appearing rather to crumble than to split under pressure. As nearly as could be determined it was about the size and shape of a turkey's egg, the fragments weighing over three ounces avoird. It consisted of a nucleus of uric acid, as large as an almond, surrounded with concentric deposits of phosphates. Externally it was covered with extremely sharp sabulous concretions. After its removal, the finger could be passed through an opening barely admitting it, into the bladder. This proved the calculus to be outside of this viscus.

For the first two days patient did well, and slight hopes of recovery were entertained. There was no reaction nor surgical fever. Nourishment was administered in every form and manner, but there was no power of assimilation. The system was worn out. Without suffering, he gradually sank into a state of collapse, which terminated fatally five days after the operation. The quantity of blood lost during the operation did not exceed two ounces, and I cannot believe that death was much, if at all, hastened by my interference.

A New Quinia Salt.—Mr. Drygin, of Kutais, Russia, (*New Remedies*, November), has discovered a new compound of quinia, which is readily soluble in water, and is well suited for hypodermic injections. It is a double *hydrochlorate of quinia and urea*. Its price is about the same as quinia hydrochlorate. At ordinary temperatures it is soluble in its own weight of water.

CLINICAL REPORT.

HYPOSPADIAS, EXSTROPHIA OF BLADDER, AND INGUINAL HERNIA IN BOTH SIDES—CONGENITAL.

To the Editors of the North Carolina Medical Journal:

J. W., age, 16 years.—The coloring in the enclosed photograph* represents the bladder, its mucous membrane everted and protrud-

ing through the opening in anterior wall of abdomen, presenting a red, moist, and exceedingly sensitive tumor. Directly under this tumor is a rudimentary glans penis, which drawn out shows about an inch and a half of a partly formed penis, its dorsal aspect entirely wanting, flat with rounded sides or edges, showing through its length a seam where the urethra should be. There is no urethra or meatus. From the glans depends an elongated prepuce, which when first noticed resembled the clitoris. Urine is constantly escaping from a point immediately above the glans and

is doubtless coming directly from the ureters. Testicles not well developed. Scrotum somewhat resembling female labia. The umbilicus is below its normal position and hidden by the everted bladder. Good physical development otherwise. There is decided delicacy of features, not strictly feminine, modest and retiring in his manner, though this is but natural under the circumstances. Apart from this almost enforced timidity and seclusion, which has doubtless greatly annoyed him, he has suffered much from irritation and excoriation produced by friction of clothing and the constant dribbling of urine. There is, I conceive, no hope from sur-

*The reproduction of the cut from the photograph necessarily substituted the shading for the coloring. If brought out by the press it will be easily understood.

gical interference, but much can be done for his comfort by the use of a properly adjusted shield, urinal and hernia pads. An attempt to make a more perfect and thorough examination by use of sound or catheter was so painful, owing to extreme tenderness, and anæsthesia being objected to, I had to desist.

I am informed that the mother while pregnant with this child received a painful injury, the period and its nature unascertained. I hope that I have been able to convey to you in the brief description some idea, though I know it will be imperfect, of this very anomalous case.

S. B. EVANS, M. D.

Statesville, N. C.

ENTERIC FEVER.

From the case-book of
F. W. POTTER, M. D., Smithville, N. C.

I was on the 25th of October last, called in to see J. F., æt., 26 years; found him suffering from remittent fever, but in spite of heroic doses of quinine given during remission which I could detect very early in the day, his fever assumed decided typhoid type.

On the third of November his temperature arose from 101° to 103° F., and remained as high as 102° for five days.

November 8th. From the 8th to 10th instant it ranged from 103° to 104°; from 10th to 15th instant, his temperature ranged from 103° to 105°. Just three days before his death, I presume perforation of bowels took place—judged to be the cause of the excessive pain from which he suffered and the increased tenderness over abdominal region. Forty-eight hours before his death, temperature run up to 107°. His delirium was considerable from 5th to 8th of November, and during the remainder of his illness was excessive, and he required constant watching, day and night.

His treatment was sustaining—beef tea, Valentine's meat juice, eggnog, and milk punch, were given freely: in addition, he drank quite three pints of good fresh milk daily.

Quinine was given on first day I saw him, in five grain doses every three hours until his head was affected; and as the remission was not marked, and temperature ranged from 101° to 102° . Quinine was increased to 10 grs. every three hours until his head was severely troubled, but without producing any, or very little abatement and that for a very short period. Afterwards fever became indisputably "typhoid." Quinine was only given to lower temperature and in as large doses as I thought prudent. The sponge bath was used from the beginning, as often as it was necessary, after each bath, temperature fell from 1° to 2° but soon rose.

Often it was found necessary to give the bath five or six times a day, but in spite of all this the fever would not abate, and terminated in the death of my patient on the 16th of November.

Remarkable characteristics of the case: there were no signs of nausea or epistaxis during the entire illness of the patient.

Autopsy fifteen hours after death—body found to be very much emaciated, muscles unusually dry and contracted. Teeth covered to the very edges with black sordes, tongue dry and fissured and very much swollen at the root, showing fungoid papilla to be enlarged. Brain appeared normal; arachnoid membrane congested and containing more fluid (subarachnoid) than normal; at base of brain there was something over an ounce of clear, healthy, looking serum. Heart enlarged, flabby and slightly fatty, weighing $10\frac{1}{2}$ ounces. Cavities empty.

Lungs appeared free from disease. Peritoneum very much inflamed, some parts appeared like cords twisted up, as it were. Stomach presented nothing unusual, except contained large quantities of gas. Spleen swollen, soft and of a very dark gray color; tissue very easily broken up, weight 15 ounces. Kidneys enlarged, flabby, weight $7\frac{1}{2}$ ounces each. Supra-renal capsules, I think, were enlarged and fatty, though I am not well enough acquainted with their anatomy to decide. Liver appeared too voluminous, otherwise healthy.

Gall-bladder shrunken, and containing a small portion of fluid bile, of dark, dirty, red color. Except a few congested patches, intestines appeared healthy to within about $2\frac{1}{2}$ or 3 feet of the ilio-cæcal valve—nearly the whole of this (lower portion) was congested, showing deep injection of most of Peyer's glands, and

I think solitary glands—within about nine inches of ilio-cæcal valve several of above named glands were ulcerated, within four or five inches of the valve. I found several deeply ulcerated glands two of them perforating the ileum. Mesentric glands very much softened and enlarged. The bladder appeared normal, contained about six ounces of urine.

Thoracic duct entirely empty and drawn closely to vertebral column.

The correspondent R. B., of the Cincinnati *Lancet and Clinic*, in an entertaining letter on the *personel* of the London Faculty says of Dr. Fothergill :

“Fothergill is known amongst his London familiars as ‘the Claimant.’ In size and appearance he is said to resemble the famous Tichborne pretender—hence the name. He weighs about 300 pounds, and he puffs and blows as he rolls along the Queen’s highway, like a steam engine. His face is red, his voice loud, and his laugh is like the explosion of a volcano. He wears in London a broad-brimmed hat, like a Mexican sombrero, and a thin coat like an American sack. He suffers from the heat ! When he takes his bandanna from his pocket and wipes the sweat from his forehead, and then clears his throat preparatory to speech, the world attends.”

CHLORAL-PLASTER.—Dr. Solari recommends chloral plaster as a sedative and counter-irritant in the treatment of the pains which are due to catching cold, such as lumbago and pleurodynia, and also of those which are due to neuralgia and to syphilis. Pix burgundica is spread on a piece of plaster large enough to cover the painful part, and from fifteen to thirty grains of powdered chloral are then strewed over every square four inches of the plaster. This is left on from twenty-four to forty-eight hours ; on removing it small vesicles will be seen on the skin, which should be pricked and covered with cerate. The blister heals quickly, but not so rapidly as the pain disappears.—*Allg. Med. Cent-Zeit.*, June 19th.

THE REGULAR MEDICAL PROFESSION.

*An Address delivered before the Rowan County Medical Society,
Sept. 11, 1878 ; and published by request of the Society.*

By J. G. RAMSAY, M. D., Rowan Mills, N. C.

GENTLEMEN :—I propose to speak of the Regular Medical Profession, and some of its relations to society.

Our profession is ancient and venerable, learned and scientific. Its origin is coeval with disease itself. Its growth has been slow and steady, until from barbers and astrologers, its votaries have become skillful surgeons and scientific physicians. A thorough knowledge of letters and language is necessary to its comprehension. Every bone and every opening, prominence, depression or angle in, or upon every bone—every muscle, nerve, vessel, or fluid, composing, or embraced in, the anatomy of the human body, and indeed of any animal body—because every physician should be well informed in comparative anatomy—has a well defined name, which cannot be properly derived and understood without a knowledge of the Latin and Greek, and often of the French, German and Italian languages.

Our armamentarium is drawn from the whole domain of nature and art. To understand the properties of medicinal herbs and plants, requires a knowledge of botany. To understand the nature of the fluids of the body—especially of the stomach,—as well as the composition and combinations of our remedies, within and without the system, a minute and practical knowledge of chemistry is absolutely essential. The circulation of the blood and other fluids, cannot be understood, without some knowledge of hydraulics ; or the heaving of our lungs without some comprehension of pneumatic laws, modified by the influences of the vital principle. Shakspeare may assert, what is true in general, that it

“ Is not in our stars,

But in ourselves, that we are underlings.”

But the changes produced in the temperature of the atmosphere and earth, by siderial influences—the ebbing and flowing of the tides, and the growth and decay of vegetable matter consequent upon

these influences, admonish us that a knowledge, even of astronomy, with its range,

“ Of planets, suns and adamantine spheres,”

is not entirely foreign to the theory and practice of medicine.

But time would fail to set forth, in proper and lucid order, the utility of electricity and galvanism ; of the microscope and stethoscope ; of the lever, screw and inclined plane—to show also, the relations of medicine to agriculture, through the food produced by the soil, and to the animal kingdom through food derived from that source, and the absolute necessity of thorough and intimate knowledge in every department of learning, to the successful practice of our profession.

Medicine is a science also, in a philosophical sense, because it is a collection of general principles or leading truths, arranged in systematic order. The truths or facts upon which it is based, were those generally acknowledged to be such, and are deduced from observation and experience. It is not an exact or fixed science, but like all the other sciences, it is experimental and progressive. We speak of the science of astronomy, but it will take more than another transit of Venus, to determine the exact distance of the earth from the sun. We speak of the science of acoustics, but the recent revelations of the telephone and microphone startle us with the suggestion, that we know, as yet, but the alphabet of sounds. Agriculture and navigation are called sciences, but like medicine, they too are, as yet, imperfect and progressive.

Medicine, especially the surgical branch, is also, an art. Art is science applied. Our theories are our science ; our practice is our art, or our theories applied.

Those, therefore, who scoff at medicine, as no science, should look well to their own reckoning ; most, if not all our knowledge being as well founded and accurate as that of any of the sciences, so-called ; and will as well bear the test of experience and time.

The medical is a useful profession, but absurd as it may seem, there are those who deny this. Many do this in theory ; some but very few, in practice. The elder Napoleon when asked his opinion on this point, decided against physicians, but, said he, “ let the women doctors be dispensed with also”—doubtless, upon the prin-

ciple that it is better to be dealt with scientifically, or *secundum artem*, than empirically. But this badinage must not pass for opinion. The Emperor had his physician. We interpret his opinion by his practice. The negative of our proposition is simply absurd. The world regards physicians as useful, and acts upon that principle. *Vox populi, vox Dei*. Who in this case can prove the contrary? Our profession is useful, in the sense of being helpful, beneficial and profitable to others, and of having power to produce good—especially physical good, and in these respects it stands second to none of the professions.

Not only is it useful; it is essential and necessary to the happiness of the human race, especially in its civilized state. Air is necessary to support animal life. Food, is necessary to nourish the body. Health, that is, freedom from pain and suffering, is indispensable to enjoyment and happiness; but the physician who cures a quinsy or pneumonia gives access to air; and when he only relieves a dyspepsia, he gives relish and assimilation to food; and when he removes pain he supplies enjoyment and happiness. Are, not air and food and happiness the necessary constituents of our nature and surroundings? What man of observation doubts that the physician is instrumental, in the majority of cases, in supplying these?

The opinion is as old as Homer himself, who asserted it, that.

“ A wise Physician, skilled our wounds to heal
Is more than armies to the public weal.”

And in our day, what army marches, what navy sails, what hospital is located, or what criminal condemned without the presence or advice of the physician. It is in sanitary measures, as applied to corporations and large congregated masses of men, that the physician is becoming to be regarded—as he always should have been—as necessary and indispensable to civilized man. Public opinion is moving slowly, but it is moving surely in this direction, especially in the larger towns and cities, and other centres of trade and commerce. The epidemics of cholera, yellow fever, diphtheria and other diseases, which now and then sweeps these centres with the besom of destruction, spreading dismay far and wide, often leaving neither orphan nor widow, to utter the loud wail.

“ As the Angel of death spreads his wings on the blast”

awaken earnest and thrilling interest in sanitary measures, and turn all eyes with imploring looks to the educated and benevolent physician.

Hence the medical is justly regarded as a liberal profession. It is liberal, not simply as embracing within its range the liberal arts and sciences, but liberal in embracing other interests not directly its own, such as the wants of the poor and society, in general, in the prevention, not less than the cure of disease. For these qualities its votaries have sometimes, though seldom, been honored and apotheosized by thankful people and rulers. Temples were anciently erected to Æsculapius. Hippocrates—the father of medicine—was gifted with a golden crown; voted the freedom of the city of Athens, and to be supported all his days at the public expense, for professional services rendered in freeing that city from the dreadful scourge of the plague. Ricord, Simpson, Langenbeck and others, of our day, have also been the recipients of Honors, Orders and decorations; but for the most part, the lights of our profession have demonstrated its liberality by lives of usefulness and toil—doing their noble work, unhonored and unrequited, and often unknown and unseen,

“As stars by day, and suns by night.”

To attain the high and noble ends of our profession, great capacity, intense application, and favorable opportunities and surroundings are requisite. It is a great mistake to believe that any upstart can be manufactured into a doctor. The requirements of the profession, demand the highest order of natural and acquired endowments. There is enough in it, to tax the mightiest intellect. But it is as true in this, as any other profession or pursuit, that mere capacity, without application cannot succeed. Those who have stood highest in our ranks, have been those, with few exceptions, who have given their whole time and energy to its study and practice.

Rush and Warren, of revolutionary fame, found time for political, as well as professional calls and engagements; and it is said of the gifted Virchow that “his voice is often heard, as an active debater and leader, in the National Assembly of Prussia, within half an hour after delivering a two hours lecture, in the Patho-

logisches Institut." But these are exceptions to the general rule. Archimedes said there was no royal road to mathematics; neither is there any sleeping palace on the high road to fame and usefulness, in medicine. To this end we meet labor and toil—often the weary night long as well as the day—nor must we look back or grow weary.

But both capacity and application, sometimes fail, without opportunity. Genius is fertile of invention, and sometimes creates its own opportunities, but as a rule, these were forced in favorable surroundings. Since the war, we of the South, find ourselves very much cramped and often entirely paralyzed. Medical books, and colleges and instruments abound, and are cheap. Patients also are numerous, and often importunate and exacting; but the latter often suffer because the former are unattainable—the means are wanting, without which it is utterly impossible that we can succeed. This state of affairs is demoralizing to the profession and disastrous to the community. "For this cause many are weak and sickly among us, and many sleep." Many a man enters the profession, high-toned and honorable in purpose, but goes out of it a quack, who speculates upon the lives and sells the blood of his fellow men, together with his honor, for money, place and power. Van and Swell, and Brass and Bombastes, self-styled doctors, make the circuit of the States, out of pure benevolence, and the lame, the halt and the blind, but more especially the victims of a false civilization, through their ante-chambers, casting the price of their own blood at the feet of these pretenders, while the poor, but modest and honest physician looks on to become a misanthropist, or to weep, like the Great Physician when He exclaimed, "how often would I have gathered thy children together, as a hen gather her brood under her wings, and ye would not." But my brethren, let us not be weary in well doing. It is consolatory as well as poetical, to deserve success. Let us forgive them—the people I mean—they know not what they do. We do know things whereof they are supremely ignorant. As for these charlatans, after much reflection—the result of no inconsiderable amount of observation and experience—I am prepared to say that they cannot be put down by denunciation. That gives them notoriety, which is to them, importance and success. Meet them, and pass them, as things that have been, and must

be. Endure their sound and fury, as the modest and virtuous matron does the brazen front of the flouncing cyprian—with imperturbable nonchalance, if not silence. But while we do this, let us deal with more forbearance and gentleness with the ill-advised and ignorant victims of quackery; and let us on all suitable occasions, and by every proper means, educate the popular mind up to a proper appreciation of the true worth of our noble profession.

The regular profession must be true to itself. To this end we must be social, not simply in our personal intercourse with each other, but also in our professional duties. If we are not true to ourselves, we must be true to the public. Hence the highest and broadest philanthropy in the fundamental idea of *reciprocity*, which governs us in the discharge of our relative duties. We give gratuitous professional attention to our brother physicians, and to their widows and orphans, as long as the former are widows and the latter minors, provided, they are more impecunious than ourselves, because we and ours are to be the recipients of like favors, under similar circumstances. We consult freely with one another—charging the patient only for the loss of time and expense incurred, by the consulting physician, in leaving his own practice—because we have all things in common and delight to communicate and help each other with the results of our studies and experience. These, we are willing, also, to communicate to the public, whenever, in our judgment, the unstable and unlearned are not liable to wrest them to their own destruction. The public often wonders why we do not use proprietary medicines, and consult with doctors professing to be possessed of secret panaceas and nostrums, which are often submitted to our inspection, that we may pronounce upon their qualities and virtues. In such cases, I explain that I cannot recommend Dr. Allcure's medicines, because he discards this principle of reciprocity. He takes all he can from me, by way of knowledge, money, patients, reputation—uses all for his own selfish purposes and gives me nothing in return. Hence, I severely, let him alone. I explain, also, that there is quite a difference between patented medicines and patented machinery. The model of a patented machine is before you; you see its operations and understand its *modus operandi*; not so with the pill or solution. These must undergo chemical analysis, often requiring much time and money, which I cannot

command—I know nothing of their vaunted virtues, and cannot be responsible for their action. This much is due, in my opinion, to our patrons who err through ignorance, rather than design.

It is with feelings of more than ordinary satisfaction that I recall the fact that the profession, in this county and State, has been forward and active in the effort to take its stand upon the high grounds designated in the foregoing remarks. The Medical Society of North Carolina held its first meeting in Raleigh, on the 16th of April, 1849. I was not able to attend, and no one was present from Rowan; but on the 23d of February, immediately preceding that meeting, I addressed a communication to the medical profession, which was published in the *Watchman* of this town, in which I said :

“I propose to the medical profession of Rowan, and if thought proper to the State, to hold a convention, when and where they shall think most appropriate, for the purpose of looking into the state of medical affairs, supplying whatever they may need, and instituting a permanent Society. Every county in the State might institute a society—these might send delegates to a State Society; and that again to the National Medical Association, and also appoint a Medical Board for the State. If this plan, in my opinion altogether feasible can be put into operation, we would have a republic in medicine, as beautiful as that of our civil government.”

What was then suggested, is now history. The Rowan County Society was organized on the 7th of January, 1854; and the State Society met in Salisbury in May of the same year. On the 17th of February, 1858—just ten years after the time I made the suggestion—I had the honor and extreme satisfaction, as a member of the State Senate, to witness the ratification of the “Act to incorporate the Medical Society of the State of North Carolina, and for the establishment of a Board of Medical Examiners.”

I allude to my own connection with these events, in no spirit of egotism. I do not claim to have originated these Societies or the Medical Board bill, of myself. Other minds and other pens were active, at that time. But I do feel consoled by the reflection that I contributed a part, however humble, in bringing about events which constitute an era in the profession, in the County and State. It is with feelings of great satisfaction also, that I advert to the fact, that

many members of our County Society have, from time to time, been recognized by appointments to responsible and honored positions in the State Society; and that three of its original members, to-wit: Drs. Summerell, Whitehead and Kelly—the latter now of Statesville—have been honored with the Presidency of that body.

But further. Another Act of our General Assembly, ratified February 12th, 1877, expressly declares that our “State Medical Society, organized in 1849, and subsequently recognized by the Legislature of the State, by the Act establishing the State Board of Examiners in 1859,” shall be a Board of Health for the State; and the county medical societies, in regular application with the State Society, shall, in like manner, be Health Boards, for their several counties.

Thus constituted, we are part of the Board of Health, and considered the medical advisers of the State; “and shall advise (such is the exact language of the Act) the government in regard to the location and sanitary management of any public institutions, and shall call attention to such sanitary matters as, in their (our) judgment, affect the industry, prosperity, happiness, health and lives of the citizens of the State.”

I have been thus particular, in citing the exact language of this Act, not simply to impress upon you, gentlemen, the high and responsible duties imposed, but also to show plainly, that the Act of 1859, establishing the State Board of Examiners, is now in full and legal operation, being distinctly recognized, by the Act of 1877; and especially to call attention to the 15th Section of the Act of 1859, which declares

“That any person who shall practice medicine or surgery in this State, without having first applied for and obtained license from the said Board of Examiners, as provided for in this Act, shall not be entitled to sue for or recover, before any magistrate or court, in this State, any medical bill for services rendered, in the practice of medicine or surgery or any of the branches thereof.”

In conclusion, gentlemen, permit me to thank you for the honor, now, for the second time conferred, in making me your presiding officer; as well as for the uniform courtesy and kindness, at all times extended to me.

Let us go forward. Neither wealth nor fame may beckon us on,

but duty which is its own reward, bids us endure the fatigues and trials of the march, and the dangers of the battle. And whatever fate awaits us, be assured, that a sense of duty, fully and conscientiously performed, secures that,

“ Which nothing earthly gives or can destroy
The soul's calm sunshine, and the heartfelt joy.”

The Cerebellum and Locomotion.—If we observe very rapid locomotion, we see how wide muscular action is ; the trunk is bent forward ; respiration is suspended for short periods ; the arms which are evidently in action in walking—and as Duchenne and Marey have insisted, not merely in pendulum action—are in running and very strong action ; they are in wide action, the activity extending even to the fingers (professional runners carry cork in their hands to prevent their nails hurting their palm) ; the muscles of the face and jaws are in action ; circulation must necessarily be effected. To say, then, that the cerebellum represents the muscles of locomotion, is equivalent to saying that it represents movements of all, of nearly all, parts of the body. * * * It is to be borne in mind that the muscles of the spine are necessarily in action in locomotion ; and in action first. No one can begin to walk until his spine be braced up, and during walking the trunk goes through a very complex motion. He does not believe that the cerebellum represents movement of all parts of the body, but that the cerebrum does.—Hughlings-Jackson, in London Hospital Reports, *Medical Times and Gazette*.

Homœopathy.—“ Homœopathy seems to be following the pathological law of erysipelas, fading out where it originated as it spreads to new regions.”—Dr. Oliver W. Holmes in Dedicatory Address.

“ A physician of common sense without erudition is better than a learned one without common sense, but the thorough master of his profession must have learning added to his natural gifts.”—Dr. O. W. Holmes in Dedicatory Address.

SELECTED PAPERS.

BATTEY'S OPERATION.

Last year was commented on the operation first practised by Dr. Battey (of Georgia, U. S.), and described by him under the name of "Normal Ovariectomy," but which many think deserves to be called, in justice to its originator, "Battey's Operation." At the time we wrote, the published cases were much fewer than they are now, and, therefore, some further remarks on this subject, in the light of the larger experience since put on record, may not be out of place.

The questions at issue concerning this mode of treatment divide themselves naturally into two groups: first, those relating to the operation itself, its mode of performance, difficulties, dangers, and results; and second as to the class of cases to which it may be thought applicable. It is not possible here to consider every point that arises; we shall merely refer to those which seem to us most important.

The contributions to which we are chiefly indebted for facts bearing on the first class of questions are two papers by Dr. Engelmann, of St. Louis, one published in the July number of the *American Journal of Obstetrics*, and the other in the August number of the *St. Louis Medical and Surgical Journal*. This writer has collected forty-seven cases, but of these four are, for different reasons, not available for purposes of comparison. We have, therefore, forty-three upon which to found our opinions. We find that of these 20·9 per cent. were cured; 25·5 per cent. were more or less improved, but not completely cured; 20·9 per cent. were either not benefited at all or made worse; and 32·5 per cent. died. Put briefly, the figures show that more than half the operations proved either fatal or useless. An adverse critic, who affected a "brutal frankness," might with accuracy say that the operation more often killed than cured. This is not an encouraging prospect.

Looking more into detail we find that the removal of one ovary is certainly less dangerous than the removal of both; but also that it is less efficacious. It appears, also, that it is much safer to remove

the ovaries through the vagina than by abdominal incision; the mortality by the former method being 17·6 per cent., by the latter 42·1 per cent. Dr. Englemann, for reasons the force of which is not apparent to us, pronounces the less dangerous method of operating to be "unscientific." We hold that the result is the final and conclusive test of all operative procedures, and one which before our preconceived notions of what is scientific or not must give way. The fact that a less percentage of cures followed extirpation of the ovaries by the vaginal method, we think must depend upon the cases chosen for this operation; for if the ovaries are effectually taken away, we cannot see how the physiological effect due to their absence should be altered by the mode of their removal.

This, then, is the operation, as to the applicability of which we have to form a judgment. The majority of the patients subjected to it not benefited at all, and the cures less numerous than the deaths. We cannot agree with Dr. Englemann in thinking it a "promising" one.

Still, may there not be cases of disease, otherwise incurable, and causing such severe suffering that even so desperate a measure as this is to be welcomed? This is the question which next arises, and to which Dr. Battey, in a paper published in the second volume of the *American Gynecological Transactions*, offers an answer. He thinks there is a field for it, but defines it with less precision than does Dr. Englemann, who describes individual cases, and also formulates, though in general terms, conditions in which he thinks this dangerous proceeding indicated. These conditions we proceed to examine.

His first class includes "menstrual hysteroneuroses, cerebral, pulmonary, gastric or other reflex symptoms, associated with, or dependent upon, the monthly period of pelvic congestion." Now, these remote nervous phenomena are the kind called hysterical. It is well known that hysterical symptoms are often present without disease of the generative organs, and that, conversely, severe disease of the generative organs may be present without hysteria. From this it follows that in such cases the predisposing condition of the central nervous system is the essential thing, and that it is comparatively an accident whether the exciting cause shall be in the uterus or somewhere else. If this be so, it further follows that cure will

not necessarily result from the removal of the local disease. Our view is borne out by the results; for of the cases given by Engelmann under this head, the single one which recovered was only somewhat improved. If the symptoms are not hysterical, but depend upon organic disease in some other part, then this argument applies with still greater force. We must bear in mind also that hysterical symptoms hardly ever endanger life, and that their prognosis is most uncertain, for there is always a possibility that under some powerful emotional excitement the patient will get well, it may be, quite suddenly. Therefore, while fully recognizing that uterine disease, where it exists ought to be cured if possible, we yet do not think it is sound practice to so greatly imperil the patient's life, with so little prospect of the cure being complete, for a disease which may be benefited by the methods much less dangerous. When we read of cases in which the symptoms were merely hysterical, and it was thought that the patients were dying, and that every means of treatment had been exhausted, we can only think that perhaps another physician might have taken a different view. Is it possible that a vivid description of the risk of this operation might have cured some of these patients by sheer terror?

As to the next group, which includes cases of "dangerous hæmorrhage, menorrhagia, or suffering caused by uterine tumors not suitable for removal." we see no reason for altering the opinion we expressed last year. This is the class of cases in which the operation seems to be most successful, for of the five cases all got well, two were cured, and three greatly improved.

Dr. Engelmann's next set of cases embraces those of "absence of uterus or vagina, or other malformations of the sexual organs, when accompanied by distressing menstrual colic." This we suppose is not intended to include cases in which the trouble is simply retained menstrual product, for in such the proper treatment is well known and obvious, viz.: to make an exit for the fluid. But as to the cases which seem to be meant, viz.: those of absence of uterus, with vicarious hæmorrhage and other distressing symptoms, we would point out that the uterus, or ovaries, or both, may be either absent or imperfectly developed in women who enjoy perfect health; and that, therefore it is certain that the symptoms in question are not a necessary consequence of defective menstruation. We

will venture further, and say that it has never been demonstrated that of this cause solely, they are all at a consequence. The few cases on record which seem to support the theory that they are, may be explained on other hypotheses. From *suppression* (not *retention*) of the menstrual flow alone it has, we think, never been proved that symptoms ever arise. It is almost always, if not always, an effect, not a cause, of disease, and is often conservative. We, of course, know that there are many diseases which become aggravated at the menstrual epoch ; but in such the menstrual molimen cannot be said to cause the disease. We, therefore, do not think that enough is known about this condition to make such a perilous mode of treatment justifiable. Of the three cases given, one died, in one the cure is marked with a query, and the other was a case of atresia of the vagina.

The next groups we may link together. They include ovarian dysmenorrhœa, chronic ovaritis, and ovaralgia. And here the importance of our contention, that we do not know enough about the pathology and diagnosis of the conditions in question, is most evident ; for in some the removal of the ovaries did not cure the patient, and in others adhesions, previously unsuspected, were found when the operation came to be done. We think that surgical gynecologists will do better if they will learn to diagnose ovarian pain and ovarian inflammation before they devise perilous operations for the cure of disease which has only been guessed at. Gynecology is no exception to the rule that accurate diagnosis must precede successful treatment.

The danger of this operation is not our ground of objecting to it. This might be diminished by practice, as has been the case with many other surgical procedures. But we think that before such a dangerous operation can be justified, we ought to have tolerable certainty that the cases will not get well under any other treatment ; that there is danger to life in letting them alone ; and that the operation will cure them if they recover. We have seen that there is the greatest uncertainty about each of these points, and therefore we cannot but think that, in the present state of our knowledge, this operation is not one which ought to be practised.

After having to express so unfavorable a judgment, it is most satisfactory to be able that the manner in which this operation has

been brought before the profession, the fullness of the details supplied as to the cases, the candor with which the results have been made known, and the tone and temper in which it has been discussed, deserve all praise ; and are in the highest degree creditable to its originator and worthy of imitation.--*Medical Times and Gazette*,

CHLOROFORM IN NATURAL LABOR.

Professor Courty of Montpellier has recently contributed to the *Gazette Hebdomadaire* (October 25 and November 8) an interesting paper upon "The Employment of Anæsthetics during Natural Labor." It seems to be founded upon an address which he delivered at the International Congress of the Medical Sciences held at Geneva last September, which was occasioned by a paper upon the subject read by Dr. Piachaud in his conclusions upon the subject, Prof. Courty took occasion to regret the slight extent to which the practice of giving chloroform during labor prevailed in France. And, indeed, it is a matter of surprise, after the safety of the practice and its great advantages have been demonstrated for so long a period in this country, so far from having been introduced into France, it has been met with what may be called a violent opposition on the part of accoucheurs—even those in high position. But we cannot but feel surprised that Professor Courty, in the paper which we are about to notice, having for its main object the making known the utility of chloroform and the futility of the objections which have been advanced to its employment, makes no allusion whatever to the efforts which have been already made in the same direction by Dr. Charles Campbell, formerly Chef de Clinique of Professor Paul Dubois, and for many years past one of the most distinguished accoucheurs of the French metropolis. Yet surely his authority in the matter is of far higher import than that of Professor Courty, he states that he is only in possession of forty cases of his own whereon to base his recommendations. Dr. Campbell was enabled in his first publication upon the subject in Profes-

sor Gubler's *Journal de Thérapeutique*, in 1874, to refer to more than 900 cases in which he had employed chloroform in natural labor; and in his memoir presented to the Congress at Geneva, and since published separately in 1877, he states that he has now administered it in 1052 out of 1657 labors, without the production of hæmorrhage or other accident, and without delaying the progress of delivery. The truth of his statements have not been denied, but still the practice which they inculcate has been violently opposed by Professors Pajot, Depaul, and others, chiefly in consequence of, it would seem, their having confounded the moderate amount of anæsthesia (*demi-anæsthésie*, or *anæsthésie obstétricale*) employed by Dr. Campbell with surgical anæsthesia which he would reserve for obstetrical operations. However, we do not doubt that the practice will eventually triumph over the opposition which always awaits every innovation in France that is not of Gallic origin.

In the meantime, we may advert to Professor Courty's own observations. He states that although for a long time past he has not practised midwifery, yet he has often found himself compelled to comply with the wishes of patients who having formerly undergone treatment for uterine or peri-uterine disease, and become subsequently pregnant, and attend them in their confinements in order to allay their fears. In regard to these cases, two things have to be observed. First, that none of them were primiparæ, so that it is possible that less chloroform may have sufficed for them. On the other hand, all these patients had been before the subjects of more or less dangerous puerperal accidents; so that the opportunities were exceptionally good for judging of the efficacy and utility of obstetrical anæsthesia, since it was known beforehand that all these patients had had bad times on former occasions, several of them having been on the point of dying from hæmorrhage or other accidents. They were therefore in relatively unfavorable conditions when compared with those of ordinary lying-in women. In all these patients, more than forty in number, chloroform was employed, and in none of them did it give rise to any serious inconvenience, or cause regret for its having been used.

1. Speaking from the experience which he has derived from observation of these cases, Prof. Courty observes, first, with regard to the period at which the chloroform should be given, that, although

this should not be considered as arrived so long as the pains are moderate and regular and all seems progressing without excessive suffering or exhaustion, yet it should not be laid down as a rule that we must wait until the expulsive period has arrived, and the torture of its accompanying pains has to be prevented. When the pains become too strong or irregular, when the patient becomes excited or exhausted by their violence, continuousness, frequent return, irregularity of their course, or the diversity and multiplicity of their seat, their neuralgic character, and want of effective power, chloroform should be administered and it is marvellous to observe how, after a few aspirations, without loss of consciousness, or even complete loss of insensibility, the pains assume their proper intermittent character with equal periods of repose, the contractions become regular, and the labor re-acquires its normal course. The first advantage of chloroform, therefore, is its relief of excessive, irregular, and enervating pains, without impeding contraction, a sensation even of slight pain being not in proportion to this amount of sensation, and the patient may be thus watched and kept in a state of half-somnolence for hours, the labor still progressing, and expulsion taking place almost unconsciously. The benefit which accrues from this suppression of pain by the diminution of subsequent reaction has not been sufficiently adverted to.

2. A second advantage is the cessation of muscular contractions, which are themselves the consequences of painful sensations having the double character of reflex motions and synergetic actions. Some of these contractions form a direct obstacle to parturition, as in perineal resistance. A portion of uterine effort is necessarily expended in overcoming this resistance; and when this is obviated, so much is gained, the uterine contraction being then employed solely in furthering the progress of the presentation. The duration of the labor is diminished by so much; and in all these cases it was found as a fact that the preceding labors had been very much longer. As regards the other contractions that are suppressed, of the muscles of the abdomen, the diaphragm, and other muscles which, participating in the effort, are brought into play when the patient exerts all her force in aid of the action of the uterus, the advantage of their suppression may not seem so evident. Prof. Courty while admitting their immediate direct efficacy in aid of the action of the

expulsive action of the uterus, operating in this way as they do in micturition and defæcation, yet believes that the service they render is often a very questionable one, giving rise frequently to accidents to which too little attention has been paid. Moreover, he does not believe that the duration of labor is really abridged by these voluntary contractions, inasmuch as proportionate perineal resistance remains. By suppressing both the abdominal and the perineal muscular contractions, the uterus is allowed to pursue its work without obstruction and without disorder, its contractions then taking on a regularity in every way favorable to the accomplishment of its function. The energetic and regulated action of the uterus can be readily felt, and may almost be seen. This has been so markedly the case in all the cases that have come under Dr. Courty's notice, that he is at quite a loss to comprehend the fears of some accoucheurs, and still less the observations which they have reported of the suppression of uterine contractibility under the influence of chloroform employed in suitable doses.

3. As a consequence of the suppression of pain and the diminution of the duration of labor, "traumatism" is necessarily also diminished. When we consider the amount of this which is produced in a prolonged labor by the pressure, contusions, lacerations, intestinal effusions, etc., which occur, influencing so many organs, we can only be surprised that we do not oftener meet with ovaritis, metritis, perimetritis, peritonitis, vesical fistulæ, and the various other puerperal accidents, which may be regarded as the natural results of such a traumatism. The chances of such accidents are greatly diminished by obstetric anæsthesia, and in no one of his cases has Prof. Courty met with any one of them.

4. Another advantage, which is opposed to the assertions of some accoucheurs, has been the result of Prof. Courty's observation, viz. : the absence of hæmorrhage, and that with regard to some of his patients who in former confinements had suffered from it. This may be due to the fact that none of the cases have been primiparæ, and that he has never had to carry chloroformization very far. The labors having been very short, and the womb having had to continue its contractions for a relatively less time than ordinary, and not having to overcome perineal resistance, has not suffered subsequently from inertia, the ordinary cause of hæmorrhage.

“In employing chloroform for lying-in women I observe the same precautions as in all my operations. In place of having her chloroformed by an assistant, so as to produce both insensibility and muscular resolution, assimilating her to a corpse, as I have sometimes seen done in England on patients about to be operated upon (which I may say in passing, explains to me the incomparably greater frequency of deaths from chloroform in that country compared with our own), I cause her to breathe the chloroform by little whiffs, and mixed at first with plenty of air, making her count aloud, in order to cause her to respire regularly, and at the same time render me an account of the condition of the nervous centres. I suspend the anæsthesia when the pains have been rendered tolerable, resuming it, and suspending it again according to the necessity. I have thus, without any danger, been able to prolong anæsthesia in women in labor from one hour to eight and even ten hours, and have consumed in a day, in small whiffs, 120, and perhaps even 150, grammes of chloroform. I say ‘perhaps,’ for it is difficult to dose it when the most simple and least frightening mode of administration is employed, viz. : by a sponge placed in a curved napkin. Thus used, so little fear does it excite, so easy is it employed, and so well tolerated by most patients, that they familiarise themselves with it to the risk of converting it into an abuse if not carefully watched.”—*Med. Times and Gazette*.

Tape-Worm in Cucumbers.—Dr. Leidy, of Philadelphia, has announced the discovery that cucumbers are liable to be infested with tape-worm. At a meeting of the Academy of Science, Pha., he exhibited a specimen of tape-worm taken from the inside of a large cucumber. It is said to have had all the characteristics of a true tape-worm, but belonged to an unknown species, the peculiarity being that the ovaries, containing the round yellow eggs, are confined to the anterior extremity of the segment.

Malluscum Contagiosum.—Professor Ballinger, of Munich, considers this disease to be one to gregarinæ, and to be identical with an affection which sometimes attacks the combs of fowls. He believes he will be able to prove the relation of the so-called “molluscum-corpuscles” to gregarinæ.—*Med. Times and Gazette*.

CORRESPONDENCE.

OUR NEW YORK LETTER.

SUMMARY: *Annual Election of Officers of the County Society.*

ACADEMY OF MEDICINE: *Dr. Sussdorf on the Dangers Incident to the Menopause—Medical Students and Colleges—Advantages of New York as a Medical Centre—Ergotin in Cerebral Hemorrhage and Hemiplegia—Iodoform in Malarial Fever—Jaborandi in Bright's Disease—Bigelow's Lithotrity—Supra-Pubic Lithotomy—Post-Partum use of Hot Water; Lacerations of the Os Uteri—Homœopathic Struggles—A Convicted Abortionist—Mollie Fancher—Poisonous Baking Powder.*

46 WEST THIRTY-SIXTH STREET,
NEW YORK, December 14th, 1878.

The annual election of officers for the New York County Medical Society was attended with quite a ripple of excitement, and resulted in the choice, by a very large majority, of Dr. F. J. Bumstead, for President, in place of the previous incumbent who was very desirous to be reelected. Dr. A. E. M. Purdy, who has for many years been the Secretary, and to whom the Society is largely indebted for its excellent condition, was chosen Vice-President, a well-conferred honor.

At the last stated meeting of the Academy of Medicine, Dr. G. E. Sussdorf, formerly of North Carolina, read a very interesting paper on the "Dangers Incident to the Menopause." In the current text books this subject is barely touched upon, and very little more is inculcated beyond that the menopause may be looked to to bring relief to a number of local diseases which exist during the functional life of the ovaries and uterus, and that active surgical interference is not only uncalled for, but is inadmissible on account of the risk which it entails at this critical period. Dr. Sussdorf exposed the fallacy of this teaching, and showed that while a number of lesions which are maintained and fed by the recurring menstrual fluxions, doubtless do disappear when menstruation finally ceases, yet there exist others which, after the climacteric, may lose their benign characters and develop into malignant

growths. Among these were enumerated certain erosions, or lacerations, of the cervix, cicatrical masses, cystic and fibro-cystic degenerations, &c., and he very forcibly urged operative measures for their complete removal, without waiting for the appearance of symptoms which indicate unfavorable changes. He holds that the risks which are supposed to attend surgical procedures at this period of life, are in a great measure imaginary, as can be demonstrated by a sufficient number of carefully recorded cases. The paper was well received, and, as was to be expected from its departure from current teaching, elicited contrary opinion from those present; but its main features were not successfully assailed.

The mania for entering the ranks of the profession seems to have gathered new impulse, at least this is to be inferred from the vast number of students enrolled at the three great colleges in this city. One of the colleges is said to have 600 matriculants, which, if all pay the regular fee of \$140 (and, of course, none are taken for less,) accounts for the faculty being able to beautify their lecture halls in a high style of decorative art.

In looking upon the well cushioned seats and folding chairs and pictured walls, and in admiring the various adjuvants which are now employed, the older ones of us cannot help wishing that the same spirit had prevailed in the callow days of our medical life. But with all this, it cannot be said that students are now better grounded in medicine than they were ten years gone by. The course covers a much wider range, and the mental *menu* offered has a very grand and attractive look, but in as much as the student is expected to ingest and (if possible) digest it all in the limited space of two years it would be little better to him than a feast of the Barmecides. It seems almost like a tilt against a wind-mill to point out the meretricious nature of the display of the modern curriculum, but it is the duty of the medical press to take note of all evils though it may offer no cure; and particularly it is its duty to impress young men, who desire to become physicians, that a long preparatory training is highly important to them, if they desire to avail themselves of the advantages which the colleges offer, and to arrive at that consummate knowledge of medical science without which no conscientious man can feel that he renders a *quid pro quo* for the fees demanded of his patients.

In every department of medicine, practical and didactic, New York has the ablest corps of professors on this continent. The representative men in all branches are found here, and they are, with few exceptions, as broad-minded and liberal as one could wish. For medical gentlemen visiting the city, if properly introduced, it is sometimes possible even to gain access to a physician's office, and to observe much of his private practice, and this is one of the advantages which visitors in quest of knowledge often fail to realize, because not aware of the possibility.

The sessions of the various Societies are open to all; the libraries are accessible through a great portion of the day, and there are private courses on special subjects offered at very cheap rates. No where in Europe can one be taught more thoroughly in histology, microscopy, ophthalmology, dermatology, &c. The disadvantage is that these courses are all private enterprises, no endowed institution yet existing in which original research in the higher and more occult departments of medical science can be carried on free of expense to the investigators. In some respects, however, our facilities are superior to those offered abroad, particularly in the matter of physiological study which is not hampered here with the maudlin sentiment in reference to vivisection that has so nearly succeeded in crushing out original research in Great Britain.

I have been prevented during the last month by engrossing duties from looking up novelties in medicine for the benefit of your readers.

I hear of the seemingly successful use of ergotin, hypodermically, in limiting cerebral hemorrhage, and hemiplegia. It should be given upon the appearance of the first symptom indicating hemorrhage within the cranium. The theory of its action is that as hemorrhages are usually due to the rupture of dilatations (aneurisms) of extremely minute vessels, the amount of blood extravasated may be limited by causing an anæmia of the brain, and ergot, it is alleged, does this. It seems reasonable. Iodoform is again coming into use as a therapeutic agent in many affections, late investigations showing that it is beneficial in malarial diseases, acting probably as an antiseptic or germicide? Jaborandi (fluid extract, or pilocarpine) promises so well in many forms of Bright's disease, attended with œdema, that it merits trial at the hands of

others than hospital practitioners. Feeble cardiac impulse and want of tone in peripheral circulation contra-indicate its use.

In surgery the experience of every day adds new testimony to the value of Bigelow's operation of lithotrity. I have witnessed it several times as performed by Dr. Van Buren and Keyes, and have seen no unfavorable effects either accompanying or following the procedure. There are rumors of fatal results from it in this city, but whether these are true I am unable to ascertain. In one instance, it is said, the coats of the bladder were "chewed" up by the jaws of the lithotrite, but if this is so it would demonstrate rather the unskilfulness of the operator than a faulty principle in the method. Moreover, if this is urged by its opponents as an objection to its adoption, it may be said in reply that the same danger is involved in the very use of the lithotrite, and apprehend that few, however strongly their face may be set against rapid lithotrity, will be willing to abandon the lithotrite altogether. If care is taken to keep the bladder properly distended with water, doubtless the danger of injuring its coats will be reduced to a minimum. The report of two cases of supra-pubic lithotomy in your "Country Clinic" has attracted some notice, both on account of the excellent results under very adverse circumstances, and the clear circumstantial record which the operator made of them. Supra-pubic lithotomy is not in favor, the mortality from it having been shown to reach 25 or 30 per cent. This estimate, however, is based upon the experience of many years ago, and when we consider how far more favorable are the statistics of laparotomy for other purposes than stone, the conclusion is irresistible that supra-pubic lithotomy will take high rank as a safe procedure, when the anti-septic method is employed in connection with it. In reference to the details of the treatment it occurs to me to suggest the immediate closure of the vesical wound with carbolized cat-gut; and there is no reason why the incision in the abdominal wall, should not also be closed at once under anti-septic cotton or gauze. A soft rubber, velvet-eyed catheter will doubtless be well borne if allowed to remain in for drainage *per urethram*, or it could be introduced several times a day as far as just within the neck of the bladder. Instead of cold water injections for cleansing, etc, hot water may be employed, because it causes no shock, is equally efficacious, as Emmet has shown, in arresting

hemorrhage. It may be carbolized to the extent of one or two grains to the ounce, and a pint or more be allowed to flow gently into the bladder once or twice a day, during the treatment; a double catheter should be used to facilitate its immediate escape so that the bladder may not be distended.

A propos of hot water I beg leave to report a case of its beneficial in the post parturient period. A lady from Providence, R. I., was confined with her second child, active intense pains having lasted ten hours. I had detected four weeks prior to her labor that she had had a slight right laceration of the os uteri, the ununited edges of which had healed over with cicatricial tissue. She had, however, had no trouble from this, but I was prepared to find a further tear after the second labor. During this labor the os was rigid and unyielding particularly on the right side, which very greatly prolonged the first stage, but the entire process was left to natural efforts, careful watch being maintained to prevent damage to bladder or perineum. On the second day the blood passed was abundant and quite florid, the temperature was 102°, and pulse 120, and there were already symptoms indicative of slight blood-poisoning. Knowing that the uterus was completely emptied of its contents, and could no longer bleed. I was quite sure that a slight laceration had taken place, and a digital examination confirmed me in this, as after thorough cleansing with the syringe, florid blood could be brought away on the end of the finger from the right side of the os. One gallon of hot water was ordered to be thrown upon and into the uterus twice a day, to the last pint of each injection 3 i of carbolic acid being added. The beneficial effect was prompt in arresting the hemorrhage, removing a certain fetor which existed, and in reducing the temperature and pulse. A speculum examination after four weeks revealed a nearly healed line passing up one half inch from the angle of the old tear.

No more valuable contribution to uterine therapeutics has ever been made than the use of hot water, and so devoid of objectional features is it that it would not be hazardous to predict for it a very important place, as a rule, in post parturient treatment. It serves to remove shreds of desidua and placenta which may have been left behind, it will arrest hemorrhage, stimulate the uterus to contract, oppose septicæmia, and facilitate the healing of laceration. Lac-

erations are not easy to detect by digital inquiry immediately after parturition, for the tissues are then very soft and flabby. They, however, occur quite frequently, few multipara being found with evidence of them. It is true they sometimes (perhaps as a rule) heal, their presence not even being suspected, but often, on account of the flow of blood, the lochia or putrid fluids, their torn surfaces fail to unite, and becoming cicatricial constitute a serious pathogenetic factor in the life of the woman.

Our friends, the homœopaths, continue to rage their little war among themselves; but the more enlightened of them (e. g, Dr. Fowler) have thus far failed to make any serious impression either by knocks or argument upon their sect.

These will continue to be homœopathists and to give their little pellets and slip in a sly dose of morphia or podophylin, in spite of the strong appeals to a higher medical manhood which is made to them. As for Dr. F. and other cultivated *confrères* of his, one sees that there is no possibility of them abiding with the others, and should they disclaim the catch-penny title of the sect, and apply for admission into the regular societies there should be nothing to oppose them, for, although they may believe that the principle *similia similibus curantur* constitutes an excellent guide to the selection of remedies, they do not make this an exclusive dogma, and so do not come under the ban of our Code of Ethics. We cannot continue to ignore the culture, high moral tone and honest purpose of some of these men, but let us hear what they have to say.

One of the flashy abortionists of this city, Dr. Bradford, has come to grief, and is contemplating a residence of fourteen years in Sing Sing. This is only the fourth conviction for this nefarious business in twenty years. Mme. Restell, it will be remembered, tore herself away from the grasp of the law, before conviction, by cutting her own throat. One scoundrel, Rosenwieg, was convicted some years ago, but during his trial the law was changed so as to inflict a severer penalty, but the old law was repealed, and as he could not be tried under an *ex post facto* law he escaped a well-earned punishment.

Mollie Fancher, of Brooklyn, who professes to live without eating, and to be clairvoyant in reading sealed letters, &c., &c.,

amuses the public press, gaping parsons and star gazers with her alleged powers. This latest fraud declines to be investigated by competent neuro-psychologists, but reserves the exhibition of her magic for the gullible and superstitions. She has not gone into the healing business as yet, but leaves our Lady of Lourdes the field all to herself.

The extent to which the adulteration of food is carried on, meeting no serious obstacle, is assuming a most serious aspect. Tons of cheap baking powders, containing alum and bicarbonate of sodium, are sold all over the land. This mixture under the influence of heat and moisture undergoes decomposition and leaves a notable amount of hydrate of alumina and basic alumina in the bread. Both of these substances are poisonous, and capable of inflicting grave injury. Some baking powders are doubtless harmless, but it is safe to leave them all alone; they are but slovenly substitutes at the best for the old time ingredients of the family biscuit.

DER,



Sir David Wedderburn in an article on the "Dutch in Java" in *Fortnightly Review* says: "Vaccination appears to work successfully in Java, as persons marked with small-pox are rarely seen, and nearly a million are annually vaccinated or re-vaccinated in the island." Just in this way among other things the Netherlands gain the confidence of the people whom they rule. Per contra in England where civilization is so much farther advanced, strong organizations use varied and expensive means to break down the safeguard so wisely and generously erected for them by the government.


MR. THOMAS H. POWERS, of the well-known firm of Powers & Weightman, manufacturers of chemicals, died of pneumonia at his residence in Philadelphia, November 20th, aged 67 years. The firm of which he was the senior member commenced business under its present title in 1847, and its career has been marked by success founded on eminent skill and rigid integrity. He leaves a very large estate, the principal being estimated at several millions of dollars.

EDITORIAL.

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 *Original communications are solicited from all parts of the country, and especially from the medical profession of The Carolinas. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.*

AMERICAN PUBLIC HEALTH ASSOCIATION AND THE YELLOW FEVER COMMISSION.

The meeting of this Association held last month in Richmond, was a disappointment to the general public as well as to some of the sanguine and over confident members, if we are to judge by the newspapers. It is needless to say that the gentlemen who had taken the greatest pains to make the meeting a large and influential one, did not expect that it would rank as an œcumenical council, putting forever at rest the questions of importation or local origin of yellow fever and means of prevention; or even to show matured work in this direction. It was unreasonable for any one to expect that even the completed work of a Commission of investigation could build up in two months a theory to which all interested could give their assent. Surely the initial work of the yellow fever commission reported on at this meeting should not be a ground for rejecting the work as a failure. The reports were premature in the

sense that they were incomplete, but this was well understood at the time. All that could be shown was the method of study and enquiry, and the capacity of the members of the commission to pursue the work undertaken.

It was clearly evident, and acknowledged at the time, by members of the commission, that much of the work must be gone over again, for verification and correction. Now in the case of the alleged importation of the yellow fever by the ship *Emily B. Souder*, the narrative was incomplete, and as the verification of this point is so essential to the successful comprehension of the spread of the fever in New Orleans, we will be pleased to know that the investigation of it is reöpened.

The delegation from Charleston composed of Dr. R. A. Kinloch, Dr. Geo. S. Pelzer and Dr. Robert Lebby, in their report to their city council, review this point, an extract of which we give.

“ The introduction of the disease of 1878 into New Orleans was affirmed by Dr. Choppin, who reported the history of the epidemic in that city to have been effected in the middle of May. Two cases of disease, now believed to have been yellow fever, though not at the time so considered by the physicians in attendance, came from the ship *Emily B. Souder*, arriving from Havana. They both terminated fatally in separate parts of the city. There were no other cases of the disease known until the eleventh of July, when the epidemic proper began. It is assumed that the germs of the disease lay dormant from May to July, and that the original cases from the *Emily B. Souder* served as foci from whence was developed the fearful scourge which afterwards desolated the city. This argument is chiefly based upon the observation that the first cases in July occurred in or near the localities where the men from the *Emily B. Souder* resided and died. We give it in substance for what it is worth. There is no further proof offered by the importationists in support of their belief as to the origin of the epidemic. *Your committee feel obligated to say that these facts are not sufficient to convince them of the importation of the disease in question.* But if it be true that germs of disease imported in May can begin to propagate as late as July, there arises a practical question in regard to the limit to be fixed to the quarantine of non-intercourse which is to be applied to our Southern seaports, as the sure and only preventive of the terrible scourge. The disease exists all the winter in portions of the West Indies. We are liable to receive cases any spring before our quarantine goes into operation. If the regulations begin on the first of May, we may nevertheless receive germs of disease in April, or, if they begin in April, we may have importations in March. Who can tell where rests the limit of our

safety? Are we of the South prepared to proclaim non-intercourse with the West Indies during twelve, eight or six months of the year? Are we, moreover, prepared to give up the decision of the matter, to the General Government, and let it determine for us the blockade of our ports? If vigorous and precise quarantine enactments are to be enforced, should they not be general to protect the whole country? Are the Northern ports willing to submit to a blockade during the long season which would seem to be necessary for the Southern ones? These and other equally pregnant questions our State and Municipal Governments may soon have to consider."

While two reporters of eminent distinction (one, Dr. Bemiss, a member of the Commission, and the other, Dr. Choppin, special reporter, agreed as to the same theory of importation. The period of quiescence between the first case of the season, in May, and the second series of cases in July, is staggering to the faith of gentlemen of mature experience, and chances of observation fully equal to that of the reporters.

We are better able to do justice to the management of the investigation by quoting the words of the Chairman, Dr. Bemiss, contained in an editorial in the December New Orleans *Medical and Surgical Journal*, as we know they are honestly and feelingly spoken :

"So much has been written, and uttered, respecting* the first mentioned functionaries, and the latter convocation, that it is due to those most interested, as well as to the profession generally, to state something which is true, regarding them.

"The senior Editor, and writer of this, was the chairman of the Yellow Fever Commission, and is therefore the better qualified to place upon record such facts as he considers important to be promulgated.

"During the prevalence of the great epidemic of 1878, certain well disposed persons thought it proper to set on foot some investigations which might, perchance, bring a degree of protection for the future. Disinterested and honestly inclined people will scarcely impugn the motives of the originators of the scheme of the investigation, however harshly they may speak of the work itself. They were probably enough optimists in sentiment, to doubt if a merciful God had ordained that such dreadful scourges must inevitably come, and, to suggest that his imperfect creatures might by some possibility have failed to discover and apply the means adequate to their prevention. However they reasoned, the result was the organization of a commission of enquiry into the cause, origin and progress of yellow fever in the United States in 1878. A benevolent and noble minded woman furnished a large portion of the

*Yellow Fever Commission and American Public Health Association.

money necessary to defray the expense of this work. The commission entered upon their labor with energy, and a determination to do whatever was possible, in accomplishing the duties devolved upon them, but with warrantable misgivings respecting the policy of an arrangement which required them to make even a partial report, in six weeks after their organization.

"It was announced in the public prints of the country, that some kind of report was due from the Yellow Fever Commission to the Public Health Association at Richmond. What character of report was to be forthcoming, was a matter of conjecture upon the part of the public, and of great perplexity on the part of the Commission. A study of enormous magnitude, and of importance paramount to any other of the present century, is let out under a contract that a partial report shall be made in six weeks after its inception. As the writer conceives, the Commission chose the only course left open to persons who placed the least estimated value upon themselves as scientific observers; which consisted in a simple statement of such facts as they had collected up to the time of reporting. They felt themselves to be in the position of jurors, who could not honestly deliver an ultimate verdict until after all the testimony had been heard.

"The American Public Health Association which met at Richmond was an assemblage of men of whom this country may justifiably feel proud. No one of cis-Atlantic birth could look upon the intellectual faces there assembled, or listen to the papers which were read, without a feeling of exultation at the wonderful advancement in sanitary science, which his own country has made and is making. The readers of this *Journal* must appeal to the forthcoming volume of transactions for positive proofs as to the value of the papers.

"Of course no reference is here made to the papers read before the Yellow Fever Commission. At least no reference of a complimentary character is made to them except to say, as justice and truth demand, that they were quite equal to the expectations of honest and competent critics, who examined, and reported in regard to them.

"There was much complaint at the meeting that the Yellow Fever Commission occupied too much of its time. Personally, the chairman of the Commission freely declares that this charge is justly laid at his door. For his excellent colleague, Dr. Cochran, he can say that all such accusations fall to the ground.

"[The Yellow Fever Commission has been under the supervision of Dr. Woodworth, Surgeon-General of the Marine Hospital Service. Prior to the Richmond meeting, he had devoted much time and energy to the work, affording all the advantages his position enabled him to bestow upon them. For reasons altogether unknown to the writer, and probably not worthy of record if they were known, there is a lack of cordiality on the part of some of the medical offi-

cers of the army towards the branch of service Dr. Woodworth controls, the army was well represented at Richmond, both for numbers and ability. Its representatives offered papers and oral discussions of great value to science, which commanded the earnest attention of the Association].

“But somebody said that Surgeon-General Woodworth had done something, or some other indefinite thing, which interrupted the usual routine of business. I say with all candor, that I observed nothing whatever to justify such an accusation or belief, and it is my present conviction, that these allegations were unjust. Indeed, there is but little doubt, that whether true, or not, they were circulated and repeated for malicious and selfish purposes by a very insignificant number of the members present.

“Our readers whose homes are among those “innocents” who live west of the Blue Ridge, and south of the James, may understand from these explanations, how a little captiousness of spirit and some petty atmospheres of discontent, or even of pugilism, have been magnified by some of the political papers into great matters. It must be remembered, also, that broad intimations had been put forth that this meeting was to be an authority which should afford a basis for a future system of quarantine. This is now a sharp and exciting political question, and no doubt some persons who were present, differed with us concerning any recommendations which should be made.”

We have taken occasion before to say that we regard the impulse given by this meeting to the furtherance of sanitary study in this country, as the most valuable work done in this direction since the war, and it is the duty of Boards of Health, municipal corporations, and Medical Societies to aid by every means in their power, the vigorous prosecution of this good beginning. They can do this by sending their best men to be present at the deliberations of the American Public Health Association, and appropriate money for their expenses.

Elastic Adhesive Plaster is prepared by Dr. W. P. Morgan, of Baltimore, Md., by giving india-rubber tissue or sheeting a coating of plaster, made by mixing together lead plaster, 1 lb., and resin, 6 drachms. It is an excellent covering in cases of psoriasis, intertrigo, eczema, etc., and its elasticity makes it invaluable in securing the coaptation of incised wounds, and in treatment of abscesses.



REVIEWS AND BOOK NOTICES.

REST AND PAIN: A course of Lectures on the Influence of Mechanical and Physiological Rest in the treatment of accidents and surgical diseases, and the Diagnostic Value of Pain. By JOHN HILTON, F. R. S., F. R. C. S. Edited by W. H. A. JACOBSON, F. R. C. S. Assistant Surgeon to Guy's Hospital. Second Edition. Pp. 300. William Wood & Co., 27 Great Jones Street. New York. 1879.

This is one of the volumes promised by Messrs. Wood as part of their Library of Standard Medical Authors. It has been before the British public for three or four years where it has been received with marked approbation.

The title of the book while somewhat explanatory of its scope, does not convey any adequate idea of its valuable clinical teaching.

The caption of a chapter taken at random will give some conception of the subject matter of other chapters.

Lecture XI. Cutaneous and Muscular Nerve Distribution in Relation of Pleura—Application to the Treatment of Inflamed Pleura—Mechanical and Physiological Rest as applied to the Treatment of Pericarditis—Analogy between the Effusion of Lymph by a Serous Membrane and the production of Callus in a Fracture—Swollen Joints a Means taken by Nature to Procure Rest for the Part—Rest Illustrated in the Treatment, Natural and Artificial, of Injury to the Eye—Nerve Distribution of the Mucous Membranes—Practical Application—Chronic Cystitis Relieved by Opium Inducing Physiological Rest—Other Examples—Cure for Onanism. Page 147.

It will be seen that this bears a resemblance to the Surgical Lectures delivered by Sir Benjamin Brodie; as the author expresses it he starts out with the wise recognition of the fact that “there is much in surgery which cannot be systematized—*i. e.*, which cannot be conveyed from mind to mind in books, in systematic treatises * * * * which cannot be given clinically, because the necessary grouping of like cases rarely accompanies clinical opportunities, secondly, on a natural anticipation of the progressive steps which might be foreseen in a scientific art cultivated with such intelligence, such laborious activity, and such an abundant

supply of husbandmen, as the present century has produced, and thirdly, on the opinion that among those who had been actively engaged for a long period in extensive hospital practice would be found a fitting exponent of surgical progress," p. 1.

The book everywhere abounds in cuts as good as one would expect to see in a low-price book, and sufficiently clear to convey the author's meaning.

Upon every page one sees something new and worth remembering, and those students whose habit it is to pin their faith to a few good books in each department of medicine cannot do better than to make Hilton's "Rest and Pain" one of their steadfast friends.

UNIVERSITY OF NORTH CAROLINA: We have received from the HON. KEMP P. BATTLE, President of the University, the Announcement of this institution for 1879.

We learn from this circular, as well as from the friends of the University who have been anxiously watching its course since its renascence, that the prospects for the future are good. We also learn with great gratification that there has been less tendency to improper and unmanly diversion among the present generation of students, than was the case of a by-gone day and this re-assures many anxious parents of a more wholesome atmosphere for their sons.

Preliminary teaching in medicine has been undertaken by resident physicians at the University, preparing students for attendance upon lectures in the great medical schools. This is a good move provided it does not encroach upon the time necessary to ground them in the fundamentals of a good education. A student intending to make medicine the profession of his life, can have no better preliminary training than is imparted in the daily drilling of the regular collegiate course. If by diligence he acquires proper methods of study, it will be worth more to him than all the medicine he can pick up in the hours he has to spare from the regular studies marked out for him in the course.

Every citizen of North Carolina should take an interest in the prosperity of the University, and not rest satisfied until they see the standard of scholarship, and the standard of morals higher than ever it was in the past.

ESSENTIALS OF CHEMISTRY INORGANIC AND ORGANIC FOR THE USE OF STUDENTS IN MEDICINE. By R. A. WITTHAUS, M. D. Professor Chemistry Medical Department University of Vermont. 16mo., pp. 257. Wm. Wood & Co., 27 Great Jones Street. New York. 1879.

The science of Chemistry is rapidly getting out of the reach of the general student, and many practitioners are not ashamed to say that they know nothing about Chemistry. The best learned physician of fifteen years practice who has not kept up with the rapid strides of chemistry (and what busy doctor can ?) is all at sea now, and must return to elementary knowledge. To any such we would say that a perusal of Dr. Witthaus' little book will be both pleasant and instructive. It is in questions and answers but written in that careful and expressive way, that can only be attained by one who has had difficulties in teaching general students. "More attention has been directed to the chemistry of therapeutics than to that of pharmacy, while physiological chemistry, which must now be regarded as one of the most important foundations of rational medicine, has been treated of as fully as the limits of the volume will permit."

It is uniform in binding with Roosa & Ely's Ophthalmic and Otic Memoranda.

BERBERIDACEÆ : The Botanical Description, Commercial History, Medical Properties, and Pharmaceutical Preparations. By C. G. and J. W. LLOYD. Cincinnati, 1878.

An interesting pamphlet of sixteen pages on the above order by gentlemen fully able to treat the subject. A full page cut is given of *Berberis Aquafolium* to enable physicians, druggists and others to identify this plant, so recently brought to the attention of the profession for skin diseases, scrofula, dropsy, secondary syphilis.

The *poudre aux yeux* names coined or adopted by some dealers, such as *cascara sagrada*, &c., is justly condemned by the authors of this brochure.

THE NEW HANOVER COUNTY MEDICAL ASSOCIATION

Dr. William Walter Lane, President.

Present, Drs. Lane, Love, Thomas, Bellamy, Burkhardt, and Wood.

After a long period of inactivity this old Association met on the 10th of December, for the election of officers with the following result :

Dr. Wm. Geo. Thomas, President.

“ William J. Love, Vice-President.

“ George Gillett Thomas, Secretary.

Dr. Wm. J. Love gave an oral account of some troublesome cases of erectile tumors of the female *meatus urinarius*. He had treated several with caustic applications twice a week for several weeks without good result. He has found also great difficulty in removing them with the knife or scissors. As soon as the mass in sight was seized it broke down under the forceps, bleeding obscured the sight, and it could not be determined whether the mass was all removed. The tumors kept returning, giving pain and being a source of dyspareunia. He proposed to slit the urethra, and dissect out the mass, and it was with regard to this surgical procedure that he asked the opinion of the Association. The bleeding was always troublesome, and he had arrested it more effectually by introducing bougies of alum. While this arrested the bleeding, it was not easy to dislodge the remaining bougie. He had on one occasion introduced a small syringe alongside the bougie and by a slow continuous stream of water had dislodged it ; but even then with difficulty.

Dr. Wood said the only objection offering itself to the incising the urethra was the danger of cicatricial contraction with its unpleasant consequences and that this applied as well to the use of caustics for the removal of the tumor.

Dr. G. G. Thomas suggested that he use Skenes endoscope, modified however, so that instead of the oval shaped fenestra, in the distal end of the instrument—there showed a longitudinal slit of four or five lines width—extending within a six lines of the distal end and opening rather more at the proximal end. He referred the gentlemen to the October number of the *American Journal of Obstetrics* for further discussions of the instrument.

Dr. Wood thought that the bleeding might be arrested by the "shirted canula," packing it carefully with styptic cotton.

Dr. Burkhardt had under his care a case of ovariectomy which he had tapped six times, and at last accounts the case was well.

Dr. Lane reported a case of cancer of the penis, which he amputated with the knife. He reports the patient as in good condition, and think the chances for freedom from return of the disease are good. The urethra was stitched to the skin, and the wound healed rapidly and left a good stump. He did not keep a catheter in the urethra nor did he find any necessity for this.

Society adjourned to meet on the 2d Wednesday in January, 1879.

WILMINGTON SUPERINTENDENT OF HEALTH.

Dr. Joshua C. Walker has been chosen to fill this position by the Board of Alderman, to succeed Dr. A. E. Wright whose continued feeble health kept him from performing the duties. Dr. Walker's appointment will give general satisfaction, and the authorities should see to it that they liberally carry out the sanitary system to be inaugurated by him.

Hypodermic Injection of Coffee.—Dr. Montrose A. Pallen, of New York, reports (*New York Medical Record*) two cases of vomiting from morphia relieved by the hypodermic injection of twenty minims of warmed fluid extract of Java coffee, and in about fifteen minutes (in one case) the patient was relieved, although one-fiftieth of a grain of atropia sulphate had failed. In one of the cases abscess resulted at the point of insertion. The suggestion is offered that perhaps the *warmed* hypodermic fluid was the secret of success, as in the case in which it was injected *cold* the abscess resulted. From Dr. Pallen's experiment it seems to be shown that coffee is an antidote for morphia. We suggest that it would be useless to rely upon any ordinary domestic decoction of coffee for hypodermic use.

NEW JOURNALS.

NATIONAL MEDICAL REVIEW.

This is the title of a new monthly published in Washington, D. C., under the editorial management of Walter S. Wells, M. D. There is no reason why this should not be a successful rival of the many monthly medical journals seeking public patronage, located as it is in the neighborhood of the National Medical Library. The present number is well printed on good paper, and indicates something better to come.

It is generally known to the medical profession and those interested in bibliography that Dr. John S. Billings, Surg., U. S. A., in charge of the National Medical Library, at Washington, is now ready to print his great "National Catalogue of Medical Literature," as soon as Congress grants an appropriation for the purpose. This indexes under subjects, and by authors, books, pamphlets and original papers in nearly all the medical periodicals of the world; including over 400,000 subject entries, and making ten volumes royal 8vo of 1000 pages each. This will be of the greatest value to physicians the world over, as it enables them to find analogues for peculiar and difficult cases, and thus often to save lives. In continuation of this work, it is now proposed to publish monthly, under the editorship of Dr. Billings and of his assistant, Dr. Robert Fletcher, M. R. C. S., a current medical bibliography under the title of the *Index Medicus*. It will be issued by F. Leypoldt, the bibliographic publisher, 37 Park Row, New York, at \$3 per year, and will enter all medical books and index the leading medical journals and transactions in English and other languages. A full list of the latter, numbering over 600, will form a part of the specimen number of the *Index*, soon to be issued.

Surgeon-General of the Navy.—Surgeon J. Winthrop Taylor has been appointed Surgeon-General of the Navy, vice Surgeon-General Grier, retired on account of age.

MEDICAL ANNOTATIONS.

Adulteration of Sugar.—Professor Henry Morton has given a quietus to the many wild stories which have been circulating about the adulteration of sugar, in an article in December *Plumber and Sanitary Engineer* which should be extensively read. It has been widely circulated that a very unwholesome substance—glucose—has been fraudulently added to the sugar of commerce.

“Let us see, then, what are the facts on which an opinion can be based in this respect :

1st. Glucose, i. e., a mixture of dextrose and lævulose constitutes the sugar of all sorts of fruits.

2nd. The first step in the digestion of sugar, is its conversion into glucose in the stomach. If, therefore, glucose will hurt us, we must never eat any sugar.

3d. Starch is converted into glucose with great rapidity by the action of saliva. If we chew a little bread for a minute, spit it out and test it for glucose, we will find this body present in appreciable quantity, even in this short time. In fact, the first step in the digestion of starch, as well as of sugar, is its conversion into glucose. Starch being our principal vegetable food, it is therefore evident that we must give up all vegetable diet to escape from this glucose if it is injurious.”

EXPERIMENTS WITH TRICHINÆ IN CHICAGO.

Dr. W. T. Belfield, demonstrator of physiology in Rush College, and H. F. Atwood, Esq., vice-president of the State Microscopical Society, have been engaged for several weeks past in the examination of pork for the presence of trichinæ. The examination was undertaken at the instance of the Department of Health of the city of Chicago. The specimens were procured by a health officer from the different packing houses in the city, no establishment of the kind having been omitted in his visitations. The flesh of one hundred hogs was examined, and in eight trichinæ were found. The estimated number in each cubic inch of striated muscle of the infected hogs varied from thirty-five to thirteen thousand. Quite a number of experiments have been made by these investigators to test the rate of propagation of the trichina worm and its effects. Rats have been used chiefly for this study. They have found that a rat may be fed occasionally with small numbers of trichinæ without in any way disturbing its health. One animal weighing two ounces was fed with infected pork in small quantities every two or three days for six weeks. No impairment in the health of the rat resulted ; it was then killed, and its body found swarming with living trichinæ ; the observers estimated that there were no less than one hundred thousand in the whole carcass. The inference drawn from

these experiments has been that any animal or man may take live trichinæ in small numbers occasionally without injury; these gentlemen further believe that many more human beings than has been heretofore supposed are infected with trichinæ,—indeed, that a majority of us are carrying these worms about in our muscles. So sure have they felt of this fact that one of them—Dr. Belfield—ate twelve living trichinæ on November 20th. More than three weeks have passed, and not the slightest effect has been experienced. Another interesting result of this study is the discovery that a small portion of sulphurous acid dissolved in the brine in which hams are pickled will kill all the trichinæ. The per cent. of acid required has not been fully determined, but the amount is so small that it is no detriment to the meat for commercial purposes.—*Boston Medical and Surgical Journal*.

CAUSES AND CURE OF INSOMNIA.

Prof. James Sawyer, of Queen's College, divides insomnia into three groups which he names "psychic," "toxic," and "senile." The psychic form may be due to sudden and severe mental shock, which will sometimes at once induce persistent insomnia; or to prolonged mental strain, in all its varied phases, which produces partial or complete vaso-motor paralysis of the intracranial blood-vessels. The subjects of this form of insomnia are mostly men, particularly those of nervous temperament. A well marked group of symptoms always follows prolonged suffering from this affection, most of which are given by certain writers among the signs of cerebral hyperæmia. It is probable that they mark what may be called irritable exhaustion of the brain, attended by more or less abnormal increase of intracranial vascularity, and accompanied by some general prostration of the bodily powers. In this form, an unnatural excitation of the cerebral vessels is the initial fault. In the next, the toxic form, a poisonous agent maintains cerebral vascularity at such a height that cerebral activity—that is, wakefulness—is an inevitable consequence. Such a poison may be introduced into the body from without, or it may be a product of diseased processes arising within the body itself. The external poisons which most frequently give rise to sleeplessness are tobacco, alcohol, tea, and coffee; the internal products which accumulate in gouty persons and in subjects of kidney disease. When due to the latter cause (internal poisons), the insomnia is rarely complete, the patient complaining that he has great difficulty in falling asleep, that he is easily awakened, and that he always dreams when asleep. The senile form is due to the generations of the smaller cerebral arteries; the vessels become less elastic, and physically unable to adapt themselves to the condition of relative arterial anæmia which is requisite for healthy sleep. In the treatment,

soporifics are often necessary. Of these, the chief are chloral, opium, morphia, the bromides, Indian hemp, alcohol, and affusion with cold water. In the severer forms of psychic insomnia, sleep must be at once procured by some efficient hypnotic, preferably chloral. In the more chronic forms, chloral should be sparingly used. In the well-nourished bromide of potassium, in from thirty to sixty grain doses, is by far the best hypnotic. Tincture of ergot, or tincture of digitalis may be combined with it. In many cases of chronic psychic insomnia, when the patient is worried, sorrowful, weakly, and anæmic, alcohol in the shape of a "night-cap" is without an equal. The formation of regular habits, and the taking of sufficient daily exercise should be insisted upon. In the toxic forms, the external poisons should be removed; the treatment of the internal form involves the treatment of the diseases from which the poisons are derived. Senile insomnia is very obstinate; perhaps in the bromides, with full doses of hop or henbane, we have the best and least harmful means for its relief.—*The Lancet*.

Ethereal Solution of Iodoform (Gubler).—Iodoform, two parts: dissolved spirit of wine, ether of each 4 parts. To be painted over the painful parts in chronic arthritis, with a camel-hair pencil: the part to be afterwards covered in with oiled silk.

Iodoform Collodion (Moretin).—Dissolve 5 parts of iodoform in 100 of collodion; mark "For external use," Used in arthritis and rheumatism.

TO OUR READERS.

DIFFICULTY OF OBTAINING PORT WINE.

The difficulty of obtaining a pure Port Wine for sickness is one great cause why physicians refuse to prescribe it where they know it would benefit their patient, because they fear that some poisonous mixture will be given them instead of Port Wine, and the injury be irreparable. Some California Wines are being terribly mixed and adulterated with alcohol and water and other ingredients to make it cheap, so as to bring a greater profit from the sales. The most excellent Port, said to be the finest Wine in the market, is made in New Jersey, from the Oporto Grape, by Alfred Speer, and has become the most reliable Wine for Hospital and Communion purposes. This Wine has been thoroughly analysed and is pronounced by chemists to be the pure juice of the grape, and to contain the most valuable medicinal properties. It is sold by druggists who purchase direct from Mr. Speer's Vineyards in New Jersey.—*Evening Post*.

The above Wine has become in great demand in New York for evening parties and entertainments. Salesroom No. 34 Warren street, New York.

• *Opening Deep Abscesses.*—In Mr. Hilton's "Rest and Pain" mentioned elsewhere, there is a method of opening deep abscesses, which like many other items in this volume, deserve a passing notice. One example which he relates will suffice. It is a case of Post-pharyngeal abscess in a young child twelve months of age. The abscess was due to disease of the cervical vertebræ. The carotid artery was pulsating upon the anterior surface of the swelling, close to the anterior edge of the sterno-cleido mastoid. The trachea was pushed forward and to the right side, and the tongue was protruded. His finger detected the pharynx a swelling which prevented deglutition. Respiration was extremely difficult, and the spine and neck were curved forwards. Large superficial veins were crossing the left sterno-cleido mastoid, and occupying the space between it and the trapezius muscle. Examination of the throat through the mouth brought on extreme dyspnœa, so that the child was nearly suffocated, the face becoming quite livid. It seems that the danger of opening the abscesses through the mouth was very great, by reason of the risk of a large quantity of pus escaping into the larynx.

An incision was carefully made, about a half inch in length, with a lancet through the sterno-cleido mastoid, thus exposing the fascia underneath it; a grooved probe was thrust through the fascia, towards the back part of the pharynx, when a little stream of opaque fluid came trickling down the director. A pair of dressing forceps was then passed along the director, making an opening into the deep abscess, letting out three or four ounces of pus. The exit of the pus was aided by passing the finger into the child's mouth and pressing upon the posterior wall of the pharynx. The carotid artery subsided to its proper position, the breathing was immediately relieved, the patient lost all sense of suffocation, and some wine and water was quickly swallowed.

The principle which the dressing forceps serves, is that in withdrawing them from the incision, with opened blades, the wound is not only dilated, but a lacerated track is made which does not heal before the contents of the abscess escape.—*Pages 75 and 76.*

Periodical Literature.—"I have spoken of the importance and predominance of periodical literature, and have attempted to do justice to its value. But the almost exclusive reading of it is not without its dangers. The journals contain much that is crude and unsound; the presumption, it might be maintained, is against their novelties, unless they come from observers of established credit. Yet I have known a practitioner—perhaps more than one—who was as much under the dominant influence of the last article he read in his favorite medical journal as a milliner under the sway of the last fashion-plate. The difference between green and seasoned knowledge is very great, and such practitioners never hold long enough to any of their knowledge to get it seasoned."—Dr. O. W. Holmes, in Dedicatory Address.

BOOKS AND PERIODICALS RECEIVED.

The Report of the Charleston delegates to the Public Health Association.

The Hygiene of the City of Charleston. By Dr. George S. Pelzer, City Registrar.

On the cheaper Alkaloids of the Cinchona Barks. Powers & Weightman, Philadelphia.

Ninety-Sixth Annual Catalogue of the Medical School (Boston) of Harvard University, 1878-79.

Sarcoma of the Kidney in a Negro Child. By W. H. Geddings, M. D., Aiken, S. C., with heliotpye. Report from Gynæcological Transactions, 1878.

Transactions of the Thirty-third Annual Meeting of the Ohio State Medical Society. Held at Columbus, O. 8v., pp. 328. Cott & Hann, Printers. 1878.

Air and Moisture on Ship-Board. A Fragment of Applied Physiology. By Thomas J. Turner, A. M. M. D., Ph. D., Medical Inspector United States Navy. Second Edition.

The Testimony of Medical Experts. Annual Address of W. H. Phillips, M. D. Kento, O. Retiring President Ohio State Medical Society. Reprint from Ohio Transactions.

Twenty-Third Annual Report upon the Births, Marriages, and Deaths in the City of Providence for the year 1877. By Edwin M. Snow, M. D. Superintendent of Health and City Registrar.

Les Tumeurs Adénoïdes des Pharynx Nasal, leur influence sur l'audition, la Perspiration et la phonation, leur traitement. Par le Dr. B. Löwenberg. Avec deux figures intercalés dans le texte. Paris. V. Adrien Delahage et Cie. 1879.

A case of Acute Puerperal Inversion of the Uterus. A clinical description of a new instrument successfully employed. With remarks on the mechanism of restoration. By John Byrne, M. D., M. R. C. (Reprinted from New York Medical Journal. October and December. 1878).

The Duties of the Medical Profession concerning Prostitution and its allied vices. Oration before the Maine Medical Association, 12th June, 1878. By Frederick Henry Gerrish, M. D. Professor of Materia Medica and Therapeutics in Bowdoin College, &c., &c. (Reprinted from the Transactions of the Association) Portland: Loring, Short & Hartman. 1878.

ALPHABETICAL LIST OF CONTRIBUTORS.

E. A. Anderson, M. D., Rupture of the Spleen	279	James Parrish, M. D., Uræmic Convulsions	285
James W. Alston, M. D., Salivary Calculus.....	83	R. L. Payne, M. D., Colica Pictonum.....	141
W. J. H. Bellamy, M. D., Gun-shot wound of the Coccyx.....	151	J. A. Reagan, M. D., Milk Sickness and Dropsy of the Amnion.....	811
Julian J. Chisolm, M. D., Treatment of Chronic Aural Discharges.....	273	B. W. Robinson, M. D., Historical Review of Diseases of Cumberland County	76
Julian J. Chisolm, M. D., Blindness induced by use of Tobacco.....	369	Jos. C. Shepard, M. D., Hemorrhagic Malarial Fever.....	81
M. J. DeRosset, M. D., The Early Recognition of Lunacy.....	69	D. B. St. John Roosa, M. D., Effects of Internal Administration of Quinine on the Ear.....	148
M. J. DeRosset, M. D., Sources of Contagium in Towns, &c.....	205	George Gillett Thomas, M. D., Acute Yellow Atrophy of the Liver.....	233
Charles Duffy, Jr. M. D., Diphtheria.....	380	L. McLane Tiffany, M. D., Flexion Treatment of Aneurism.....	349
Joseph Graham, M. D., Laceration of the Cervix Uteri.....	1	Clinton Wagner, M. D., Intra-Laryngeal Growths, Vol. 2.....	90
A. H. Goelet, M. D., Hour-Glass Contraction before delivery.....	152	Octavius A. White, M. D., A new and refined method of examining the Pulse.....	214
R. A. Kinloch, M. D., Inland Quarantine, Vol. 2.....	305	Ed. Wigglesworth, M. D., Why should we use the Metric System?.....	149
P. L. Murphy, M. D., Lithotomy.....	354	H. G. Woodfin, M. D., Milk Sickness.....	13
W. J. Love, M. D., Hemorrhagic Malarial Fever.....	86	H. G. Woodfin, M. D., " ".....	187
W. W. Lane, M. D., Resection of the Femur.....	19	Thos. F. Wood, M. D., Leucoderma.....	282
W. C. McDuffie, M. D., History of Diphtheria in Fayetteville and vicinity.....	80		

INDEX.

If Vol. 2 is not designated the reference is to Vol. 1.

A blington Academy of Medicine.....	321	American crow-bar case.....	324
Abscess of the Liver.....	407	American Public Health Association, Vol. 2.....	336 and 413
" " " " hypochondria.....	407	Amputation of thigh, Vol. 2.....	304
Aboriginal Americans, syphilis among.....	414	" " both legs.....	328
Abscesses, opening of Vol. 2.....	327	" " leg, Vol. 2.....	254
Acne and its treatment.....	265	Amnion, dropsy of, Vol. 2.....	153
Adhesive Plaster, Vol. 2.....	417	Antiseptic Surgery, cost of.....	42
Adhesive plaster in pleurisy.....	201	" Thymol.....	267
Address, valedictory, N. C. Medical Society, Vol. 2.....	76	" System, the bases of.....	96
Adulteration of Sugar, Vol. 2.....	424	Anesthetics.....	113
Ague in China, treatment of.....	60	Anti-herpetic lotion.....	201
Air, passage of through walls, Vol. 2.....	276	Anti-neuralgic injection, Marino's.....	325
Alcohol, test for.....	408	Aneurism, contribution to flexion, treatment of.....	349
" Gallard's Crusade, vs.....	398	Annual Address, N. C. Medical Society, Vol. 2.....	10
Amblyopia.....	336	Apomorphia, causes ejection of foreign body, Vol. 2.....	290
American Public Health Association, Vol. 2.....	413	Artist Doctors.....	408
American Medical Association, Vol. 2.....	50		

- Asthma, iodide potass. in.....198
 Aspirating the liver for abscess.....408
 Asylum reform, motives and methods
 of, Vol. 2.....279
 Association of Med. Editors, Vol. 2..... 50
 Asthma in Bright's disease.....242
 Atropia to antidote opium.....177
 Aural discharges, treatment of.....273
B
 Bael fruit in diarrhoea, Vol. 2.....190
 Bahnson's stylet.....390
 Battey's operation, Vol. 2.....397
 Berberidaceæ, Vol. 2.....420
 Bernard, Claude, sketch of.....237
 Biographical notices of North Caroli-
 na Physicians..... 62
 Biliary secretions, Rutherford's ex-
 periments, Vol. 2.....161
 Black-gum bougies.....130
 Blindness induced by use of Tobacco,
 Vol. 2.....369
 Blood, human, detection of, Vol. 2.....216
 Books and Pamphlets received..... 65
 " " " "132
 " " " "291
 " " " "415
 " " " " Vol. 2.....148
 " " " " " "363
 " " " " " "428
 Board of Medical Examiners.....254
 " " " "335
 " " " " new.....347
 " " Censors, report of.....341
 " " Health, commercial value.....409
 " " " committee of, V. 2.....323
 " " " of N. C., Vol. 2.....345
 " " " State, Vol. 2.....350
 " " " Duplin, Vol. 2.....365
 British and Foreign Med. Ch. Review.. 52
C
 Capsulo-lenticular cataract, Vol. 2..... 1
 Carbolated camphor in Diphtheria.... 62
 Calculus, salivary.....83
 " renal, containing indigo.....270
 Caesarian section in N. C.....313
 " " and removal uterus.....324
 California medical law, Vol. 2.....344
 Calculus in Prostatic and Membran-
 ous Urethra, Vol. 2.....381
 Cerebellum in locomotion, Vol. 2.....396
 Charcot on caseous pneumonia, Vol. 2.. 37
 Chloroform in labor, Vol. 2.....401
 Chrysophanic acid in psoriasis..... 52
 Chlorodyne substitute..... 59
 Chlorate potassium solution, explo-
 sive127
 Chloroform, aqua ammonia and oil
 turpentine with, Vol. 2.....277
 Chloroform narcosis, ice in rectum for.....326
 Chloral and glycerine in constipation,
 Vol. 2..... 38
 Chloral per rectum, Vol. 2.....317
 Cinchona plant in Africa..... 58
 " vs. tobacco, Vol. 2..... 94
 Cinchonia, Vol. 2..... 49
 Commission, Yellow Fever, Vol. 2.....413
 Correspondence from Paris..... 37
 " " "100
 " " "171
 " " "237
 " " "397
 Correspondence from New York..... 38
 " " " "107
 " " " "163
 " " " "245
 " " " "304
 " " " "403
 Collect plectonum.....144
 Commercial value of a Board of
 Health.....409
 Coccyx, gun-shot wound of.....151
 Colles fracture, Pilcher on.....408
 Contagium in towns, sources of.....245
 Consumption, contagiousness of, V. 2.....359
 Cornetts.....336
 Cumberland County, Hist. review of
 diseases..... 76
D
 Death Roll of Medical Men, Vol. 2.....178
 Dietary articles, harmless coloring for. 60
 Dialyzed iron, not an antidote, V. 2.....335
 Dickson's subcutaneous Tenotomy
 Vol. 2.....380
 Digitalis contra-indications for, V. 2.....290
 Dilator of urethra, head of urine for.....128
 Diarrhoea, infantile of summer, V. 2... 57
 Diphtheria, prognosis and treatment.. 29
 " in San Francisco..... 61
 " in Fayetteville, etc..... 80
 " seasons of prevalence of.....178
 "331
 "380
 " Vol. 2..... 70
 " " 2.....134
 Disease, infective processes of..... 89
 " heart, causes and courses of,
 Vol. 2.....256
 Doctors, London secular press on.....128
 Doremus, passage of air through walls,
 Vol. 2.....216
 Dogs, Mahomedan antipathy for, V. 2.....133
 Douche, hot uterine.....247
 Drops, administration of remedies by. 57
 Dropsy of amnion, Vol. 2.....153
 " from loss of blood, Vol. 2.....154
 Drosera in medicine, Vol. 2.....196
E
 Ear, foreign bodies in.....129
 Eczema, Martin's rubber bandage in,
 Vol. 2.....276
 Edenborough Medical College..... 45
 Egyptian ophthalmia, Vol. 2.....192
 Elevated Railway, Vol. 2.....137
 " " " 2.....275
 Elephantiasis of penis, Vol. 2..... 65
 Emmett's principles and practice of
 gynecology, Vol. 2.....139
 Enteric Fever, Vol. 2.....386
 Epileptic aura, importance of arrest of.....160
 Epilepsy, means for preventing attack.....160
 Ergotin in fibroid tumors of uterus.....125
 Ergot in diabetes insipidus, Vol. 2..... 58
 Erysipelas, carbolic injections for, V. 2.....381
 Esmarch's method in painful ulcers.....122
 Extension, Weight and pulley.....114
 Exposition, Paris.....402
F
 Facial atrophy, unilateral, Vol. 2.....279
 Femur, fracture of, inequality in.....196
 " " " weight and pulley
 extension..... 44
 Filarie in the blood.....268
 Foetal hydro-nephrosis.....245
 Flexion treatment of Aneurism.....348
 Fracture, delayed union of.....401
 " Pilcher's404
 " Colle's.....408
 Funeral rites similia similibus.....252
 Fucus vesiculosus..... 53
 " helminthocorton.....132
G
 Gelsemia as a mydriatic..... 54
 Gelsemium poisoning, note on, V. 2.....215
 Germicide, thymol as.....267
 Glucose, quantitative estimation of.....359
 Gonorrhoeal virus, duality of.....217

Goa powder in psoriasis.....127
 " " " ".....327

Hammond, ex-surgeon general.....182
 Hemarumoscope.....214
 Hemoptysis, signs of.....62
 Hemorrhoid, carbolic injections in,
 Vol. 2.....302
 Hippophagy in Paris and London, V. 2.....130
 Hooping-cough, diphtheroidal ulcer of
 frenum, Vol. 2.....278
 Hour-glass contraction of the uterus
 before delivery.....153
 Hydrochloric acid diminished in fever 55
 Hydrophobia, committee on.....61
 " prevention of, Vol. 2.....131
 Hypodermic injection of nitrate of
 silver.....243
 Hypodermic injection of Chloroform.....243
 " " " pure water.....244
 " " " coffee, V. 2.....422
 Hyposphadlas and Exstrophy, V. 2.....384
 Hysteria in a boy, Vol. 2.....35

Ice in the rectum in chloroform nar-
 cosis.....325
 Iliac artery, traumatic lesion of, V. 2.....224
 Insanity, legal relations of homicidal,
 Vol. 2.....20
 Insomnia, causes and cure, Vol. 2.....425
 Intra-laryngeal growths, Vol. 2.....99
 Intra-uterine injections of Ergot.....54
 Iodoform in laryngitis, Vol. 2.....42
 " " chronic ear discharges, V. 2 43
 " collodion, Vol. 2.....126
 " cotton, Vol. 2.....44
 " ethereal solution of, V. 2.....426
 Iodine tincture, subcutaneous use for
 fracture, Vol. 2.....134
 Ipecacuanha as an oxytocic, Vol. 2.....358
 Iridectomy preliminary to cataract,
 Vol. 2.....45
 Iron, sublimate of, as an antiseptic,
 Vol. 2.....357

Jenner, autograph letter of.....58
 Jugular vein, wounded internal, V. 2.....227

Kibbee's fever bed, Vol. 2.....45
 Knot of the cord, diagnosed before de-
 livery.....323
 Koumiss, mode of preparation, Vol. 2.....55

Laceration of the cervix uteri.....1
 Laparo-elytrotomy.....264
 Laryngeal Society of New York, pro-
 ceedings of, Vol. 2.....42
 Laryngeal growths, Vol. 2.....44
 Larynx, excision of, &c.....131
 Leucoderma.....284
 Liquefaction of nitrogen, hydrogen
 and air.....125
 Lithotomy, report of fifty-two cases.....300
 " three cases of.....354
 " and lithotrity, compara-
 tive claims, Vol. 2.....244
 Lithotomy, supra-pubic, Vol. 2.....313
 Lithotrity at a single operation.....319
 Liver, abscess of.....407
 Liver, acute yellow atrophy of, V. 2.....253
 Localization, cerebral.....390
 Lister, anemia by elevation of limb,
 Vol. 2.....39
 Llanacy, early recognition of.....69

Malarial fever, hemorrhagic, cure of.....84
 " " " ".....96
 Malaria, action of on the spleen.....301

Malaria, action of on the liver, V. 2.....160
 Management of the Medical Society
 of North Carolina.....255
 Management of the Medical Society
 of North Carolina again.....314
 Martin's elastic bandage.....122
 Marino's anti-neuralgic hypodermic.....325
 Medical Society of North Carolina.....60
 " " " Onslow, Vol. 2.....60
 " Examiners, Board of.....68
 Medico-legal investigations.....183
 Medical education and institutions,
 history of.....315
 Methylene, death from.....390
 Metric system, Vol. 2.....27
 " " why should we use it,
 Vol. 2.....149
 Microphone, Vol. 2.....57
 Milk of an Eskimo.....181
 " sickness.....13
 " ".....187
 " ".....301
 " intra venous injection of.....84
 Mineral waters, Vol. 2.....190
 Mistletoe, American.....322
 Monster, double.....130
 Morphia, action of.....57

Nails, the.....316
 Naso-pharyngeal polypus, Vol. 2.....150
 National med. library, Catalogue of.....115
 Nausea of pregnancy.....400
 Nerve-stretching in neuralgia.....29
 New Hanover County Medical As-
 sociation, Vol. 2.....
 New hints for snake bites, V
 North Carolina Medical A
 " " " ".....

Obituary of M. Barth.....64
 " " Dr. James Blundell.....202
 " " Fleetwood Churchill.....202
 " " F. N. Luckey, Vol. 2.....232
 " " Martyn Paine.....64
 " " Wm. R. Sharpe.....64
 " " William Stokes.....133
 " " Lunsford P. Yandell.....202
 Obstetric Phantoms.....51
 (Esophagus, foreign bodies in.....154
 (Edema glottidis, Vol. 2.....200
 Otis', method in stricture.....300
 " introductory lecture, Vol. 2.....272
 Opium and bromide potassium in
 heart disease.....25
 Opium, medico-legal detection of, V. 2. 54
 " smoking.....60
 Ophthalmia, Egyptian, Vol. 2.....192
 Optics, science of, vs. art of painting,
 Vol. 2.....56
 Ostrich, digestion of.....132
 Ovariectomy, remarkable.....246
 Ovarion corpuscles not present.....248
 Oxytoxics, domestic.....322

Pathogeny of keratoconus, Vol. 2.....212
 Penis, elephantiasis of, Vol. 2.....65
 Peptone, value of.....268
 Perineum, rupture of, Vol. 2.....280
 Perspiration, influence of, on tempera-
 ture, Vol. 2.....324
 Pharmaceutical notes, Vol. 2.....59
 Phonograph.....59
 Phoradendron flavescens.....322
 Phthisis, selection of cases for travel
 Vol. 2.....191
 Phthisis, treatment of pyrexia, V. 2.....359
 " treated by sulphur, V. 2.....360
 Physiological facts, Vol. 2.....253

- Tracheotomy, uncommon cause of death in.....211
 Trichinæ in Chicago, Vol. 2.....345
 Trommer's Malt Extract, Vol. 2.....62
 " " " " 2.....349
 Typhoid fever, causation of, Vol. 2.....175
U
 Upas tree, Vol. 2.....53
 Urethrotomy, dilating.....404
 Urethra, dilatation in female.....247
 Uræmic convulsions, a case of.....285
 Urea, Feltz & Ritter's experiments, Vol. 2.....136
 Urea pure never produces convulsions, Vol. 2.....136
 Ustilago zæe.....323
 Uterus, extirpation of, Vol. 2.....362
V
 Vaccine virus, Beaugency.....68
 " " Martin's introduction of.....189
 Vaccination in Confederate army.....188
 " peculiarities of Jennerian.....191
 " syphilitic.....201
 " in North Carolina.....307
 Vaginismus, Vol. 2.....357
 Valerian in diabetes, Vol. 2.....283
 Valvulitis, Vol. 2.....256
 " " 2.....318
 Version, choice of leg in.....55
 Viscum Album.....323
W
 Warren-Bey, Edward, M. D., Biography of, Vol. 2.....113
 Warts for skin-grafting, Vol. 2.....273
 Washburn Mills, theory of explosion, Vol. 2.....119
 Water, suffering from deprivation of.....320
 Weight and pulley extension.....44
 Wilmington Sup'l of. Health, V. 2.....422
 " health of, Vol. 2.....58
 " " " " 2.....230
 Woman's Hospital, controversy.....43
 Wrist-drop in Alcoholism.....216
 Writer's cramp, strychnia for.....270
 " " " " Vol. 2.....200
Y
 Yellow Fever, Vol. 2.....281
 " " epidemic in Savannah 1876, Vol. 2.....31
 Yellow Fever, Dr. Choppin's case, V. 2.....165
 " " circular about the investigation of, Vol. 2.....340
 Yellow Fever Commission, Vol. 2.....27
 " " treatment of " 2.....208
 " " " " " 2.....202
 " " " " " 2.....204
 " " Kinloch's resolution, V. 2.....205
 3

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